

PrecisA Monoclonals™

- Precise - Accurate - Targeted -



PrecisA Monoclonals™



Unique Features of PrecisA Monoclonals

PrecisA Monoclonals™ are mouse monoclonal primary antibodies developed for a number of carefully selected targets. Atlas Antibodies selects the relevant antibodies for each target and takes special care in offering clones recognizing unique non-overlapping epitopes and/or isotypes. Thanks to a stringent production process and characterization procedure, PrecisA Monoclonals™ provide outstanding performance in approved applications, defined specificity, secured continuity, and stable supply.

Antigen Selection

The Protein Epitope Signature Tag (PrEST) concept gives the antibody performance built-in from the start. Using proprietary bioinformatics software, 50-150 amino acid regions (with the lowest possible sequence identity to other human proteins) are selected, cloned, and recombinantly produced in a tightly controlled set-up.

Clone Selection

Functional characterization is performed on many ELISA positive mouse cell supernatants to select the optimal clones for each application before subcloning and expansion of selected hybridomas.

Epitope Mapping

Clones are epitope-mapped using synthetic overlapping peptides in a bead-based array format to select clones with non-overlapping epitopes only.

Hybridoma Cell Cultivation

Atlas Antibodies uses in-vitro methods in the production scale-up phase, thus replacing mice for ascites fluid production.

Isotyping

PrecisA Monoclonals are isotyped to allow for multiplexing using isotype-specific secondary antibodies.

Antibody Characterization

The characterization of PrecisA Monoclonals starts with an extensive literature search to select the most relevant and clinically significant tissues to use for immunohistochemistry (IHC) characterization. As a result, you will often find more than one tissue type displayed in the IHC application data in our product catalog. In addition to the positive stained tissue, we also show the staining in a negative control tissue and, if relevant, staining in cancerous tissue.

The characterization for Western Blot (WB) data follows that same working procedure. It starts with a profound literature search to find the best matching lysate, which can be endogenous human cells, tissue protein lysates, or optionally recombinant full-length human protein lysates.

Each PrecisA Monoclonal is thus supplied with the most appropriate characterization data for its specific target.

PrecisA Monoclonals™ are developed by Atlas Antibodies, based on the knowledge from the Human Protein Atlas with careful antigen design and extended validation of antibody performance.

Antibody Panels

When there is an added value in combining several primary antibodies, PrecisA Monoclonals are developed in panels. Examples are the Organelle Markers Panel for co-localization of proteins and the Laminin Markers Panel for evaluating and selecting cell culture media.

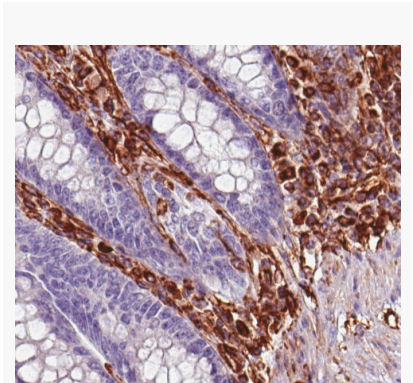


Fig.1 The immunohistochemical staining of human rectum using the Anti-VIM (Vimentin) antibody (AMAb90516) shows strong positivity in mesenchymal and lymphoid cells.

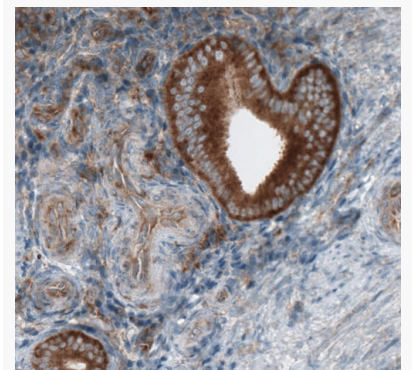


Fig.2 The immunohistochemical staining of human uterus using the Anti-DICER1 (dicer 1, ribonuclease type III) antibody (AMAb90737) shows cytoplasmic immunoreactivity in the glandular epithelium cells.

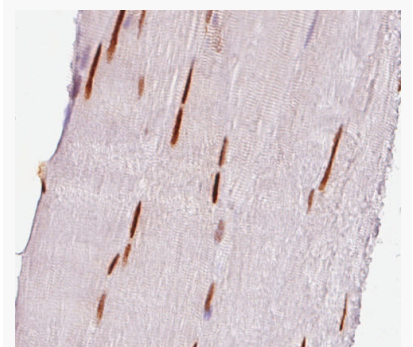


Fig.3 The immunohistochemical staining of myocytes in human striated muscle using the Anti-SIX1 (SIX homeobox 1) antibody (AMAb90544) shows strong nuclear immunoreactivity.

Front cover:
Multiplexed IHC-IF staining of human rectum section using PrecisA Monoclonals Organelle Markers antibodies. The Anti-TUFM AMAb90966 shows mitochondria in green, Anti-HNRNPC AMAb91010 shows nuclei in magenta and Anti-EZR AMAb90979 demonstrates plasma membrane in red.

Co-Development Program

If you are looking for mouse monoclonal antibodies currently unavailable in our catalog, we invite you to participate in our Monoclonal Antibody Development Program.

Upon agreement, Atlas Antibodies will develop and produce the monoclonal antibodies using the same procedures as all PrecisA Monoclonals.

The optimal clones for specific applications will be selected in collaboration with you, either in your laboratory or at our facilities, with your expert input and/or material.

Benefits of the program

Atlas Antibodies covers all development costs. If the project results in a commercialized product, it will be added to Atlas Antibodies' PrecisA Monoclonal product portfolio.

Scientific research remains at the heart of Atlas Antibodies, and we welcome you to contact us for possible collaborations on both existing and future product offerings.

contact@atlasantibodies.com

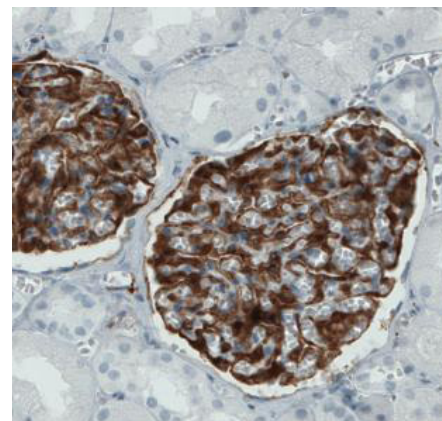


Fig.4 One antibody developed in collaboration with an external partner is the phospholipase A2 receptor 1 mouse monoclonal Anti-PLA2R1 (AMAb90772). In the image, the immunohistochemical staining of human kidney using the Anti-PLA2R1 antibody, shows strong immunoreactivity in renal glomeruli.

Oncology Biomarkers

Need for Novel Cancer Biomarkers

The microscopic evaluation of a tumor stained tissue sections is the gold standard for cancer diagnosis. However, in order to optimize patient treatment and provide guidance for therapeutic intervention of the underlying disease, there is often a need for additional tumor stratification methods.

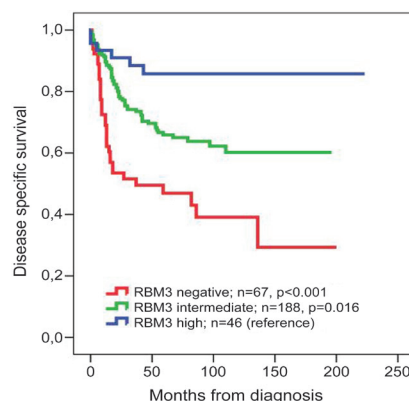
The protein expression analysis in cells from a tumor tissue often provides important additional information to the responsible pathologist. Immunohistochemistry (IHC) using protein-specific antibodies provides a tool to detect the presence, abundance, and localization of specific proteins.

With a limited repertoire of protein biomarkers available today, there is a clear and unmet clinical need to identify novel sets of biomarkers to provide a more accurate diagnosis and a better assessment of patient prognosis, ultimately leading to more individualized treatment.

One example of such useful biomarker in cancer is the RNA binding motif protein 3 (RBM3).

Immunohistochemical studies have demonstrated that RBM3 has proto-oncogenic potential because its expression is up-regulated in various human tumors and high RBM3 expression levels are associated with good prognosis in the clinic.

Therefore, this protein is a potentially useful biomarker for cancer treatment.



Survival analysis of urothelial cancer patients stratified according to RBM3 expression.

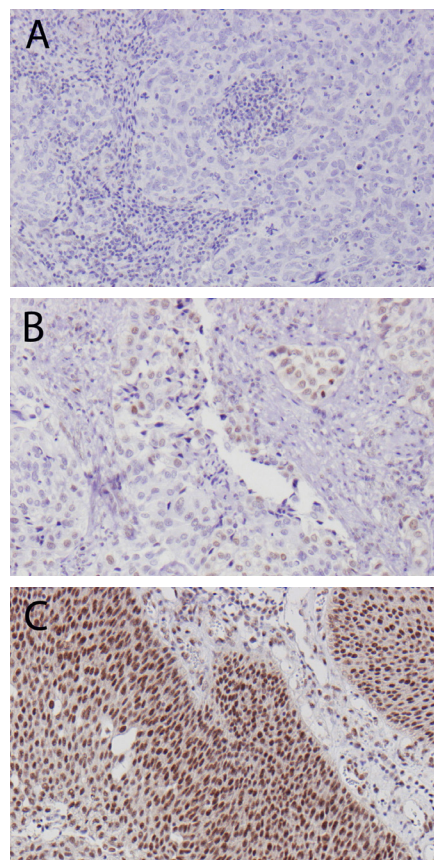


Fig.5 Representative nuclear staining of RBM3 in urothelial cancer tissues: no RBM3 expression (A), intermediate RBM3 expression (B), high RBM3 expression (C). Immunohistochemistry analysis is performed using the monoclonal Anti-RBM3 antibody AMAb90655.

PrecisA Monoclonals for Cancer Research

Product Name	Product Number	Isotype	Validated Applications
Anti-ACSL5	AMAb90634	IgG1	IHC, WB
Anti-ADGRL4	AMAb91268	IgG1	IHC, WB
Anti-AKT1	AMAb90834	IgG1	WB, ICC-IF
Anti-AKT1	AMAb90835	IgG1	WB
Anti-ALDH1A3	AMAb91754	IgG2a	IHC*, WB, ICC-IF
Anti-ANLN	AMAb90660	IgG1	IHC*, WB, ICC-IF
Anti-ANLN	AMAb90662	IgG1	IHC*, WB*, ICC-IF
Anti-ANXA1	AMAb90558	IgG1	IHC, WB*, ICC-IF
Anti-ARG1	AMAb90545	IgG1	IHC, WB
Anti-ARID1A	AMAb91192	IgG1	IHC, WB, ICC-IF
Anti-ASRGL1	AMAb90907	IgG1	IHC, WB
Anti-ATAD2	AMAb90541	IgG1	IHC*, WB*, ICC-IF
Anti-ATF3	AMAb90909	IgG1	IHC*, ICC-IF
Anti-ATRX	AMAb90784	IgG1	IHC, WB*, ICC-IF
Anti-BRAF	AMAb91257	IgG1	IHC, WB
Anti-BRAF	AMAb91258	IgG2b	IHC, WB
Anti-BRD4	AMAb90841	IgG1	IHC, WB*, ICC-IF
Anti-BRD4	AMAb90843	IgG1	IHC, WB, ICC-IF
Anti-CA12	AMAb90639	IgG1	IHC, WB
Anti-CA12	AMAb90637	IgG2a	IHC, WB
Anti-CARS	AMAb90970	IgG1	IHC, WB
Anti-CARS	AMAb90971	IgG2a	IHC, WB
Anti-CARS	AMAb90972	IgG2b	IHC
Anti-CARS	AMAb90973	IgG1	IHC, WB
Anti-CD40	AMAb90905	IgG1	IHC*, WB
Anti-CD45	AMAb90519	IgG2a	IHC, WB
Anti-CD45	AMAb90518	IgG1	IHC, WB
Anti-CD68	AMAb90873	IgG1	IHC
Anti-CD68	AMAb90874	IgG1	IHC, WB*
Anti-CDH1	AMAb90862	IgG2b	IHC*, WB*, ICC-IF
Anti-CDH1	AMAb90863	IgG1	IHC*, WB*
Anti-CDH1	AMAb90865	IgG2a	IHC*, WB*, ICC-IF
Anti-CDH2	AMAb91220	IgG1	IHC*, WB*, ICC-IF
Anti-CHGA	AMAb90525	IgG1	IHC, WB, ICC-IF
Anti-CHGB	AMAb91709	IgG1	IHC*
Anti-CHGB	AMAb91710	IgG1	IHC*, ICC-IF
Anti-CHI3L1	AMAb91777	IgG2b	IHC, WB
Anti-CHI3L1	AMAb91778	IgG1	IHC, WB
Anti-CLDN1	AMAb91213	IgG1	IHC*, WB, ICC-IF
Anti-CSF1R	AMAb91718	IgG1	ICC-IF
Anti-CT83	AMAb91318	IgG1	IHC*, WB
Anti-CTCF	AMAb90663	IgG2a	IHC, WB*, ICC-IF
Anti-CTCF	AMAb90664	IgG1	IHC, WB, ICC-IF
Anti-CTCF	AMAb90666	IgG2b	IHC, WB, ICC-IF
Anti-CTNNB1	AMAb91209	IgG2a	IHC, WB, ICC-IF
Anti-CTNNB1	AMAb91210	IgG1	IHC, WB, ICC-IF
Anti-DAXX	AMAb91191	IgG1	IHC, ICC-IF
Anti-DES	AMAb91302	IgG1	WB, ICC-IF
Anti-DES	AMAb91303	IgG2a	WB, ICC-IF
Anti-DICER1	AMAb90737	IgG2a	IHC, WB*, ICC-IF
Anti-EGFR	AMAb90816	IgG1	IHC, WB
Anti-EGFR	AMAb90819	IgG1	WB

* Enhanced Validation

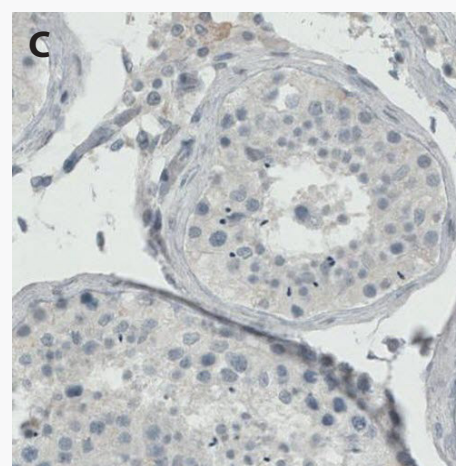
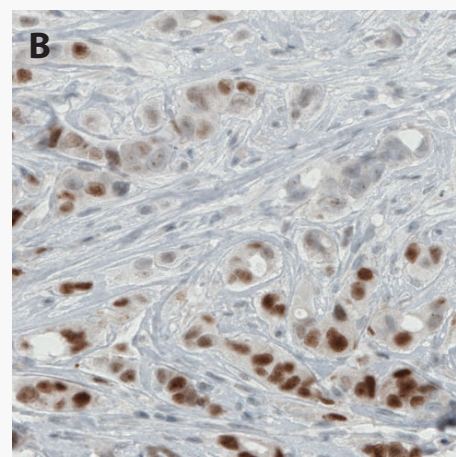
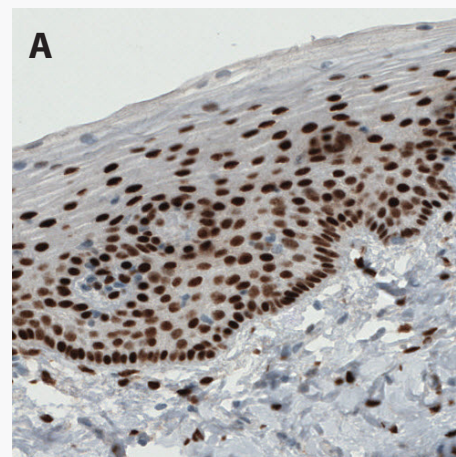


Fig.6 Estrogene receptor 1 (ESR1) is a nuclear transcription factor important for hormone binding, DNA binding, and activation of transcription. Estrogen receptors are essential for e.g. sexual development and reproductive function, and involved in pathological processes including breast and endometrial cancer. The Anti-ESR1 monoclonal antibody AMAb90867 shows nuclear immunoreactivity in normal cervix (A) and breast cancer tissue (B). Testis was used as a negative control (C).

Product Name	Product Number	Isotype	Validated Applications
Anti-ENG	AMAb90925	IgG1	IHC
Anti-ERCC1	AMAb90871	IgG2a	IHC, ICC-IF
Anti-ERCC1	AMAb90872	IgG1	IHC, WB
Anti-ESR1	AMAb90867	IgG1	IHC, WB*
Anti-EZH2	AMAb91749	IgG2b	IHC*, WB, ICC-IF
Anti-EZH2	AMAb91750	IgG2a	IHC*, ICC-IF
Anti-EZH2	AMAb91752	IgG2b	IHC*, WB, ICC-IF
Anti-EZR	AMAb90975	IgG1	IHC, WB, ICC-IF
Anti-EZR	AMAb90976	IgG1	IHC*, WB*, ICC-IF
Anti-EZR	AMAb90977	IgG2b	IHC, WB, ICC-IF
Anti-EZR	AMAb90979	IgG2b	IHC, WB, ICC-IF
Anti-F3	AMAb91235	IgG1	IHC, WB*
Anti-F3	AMAb91236	IgG2a	IHC, WB*
Anti-FABP7	AMAb90595	IgG1	IHC, WB
Anti-FBLN1	AMAb90696	IgG1	IHC*, WB*, ICC-IF
Anti-FLT1	AMAb90704	IgG2b	IHC*, WB
Anti-FLT1	AMAb90703	IgG1	IHC*
Anti-FN1	AMAb91223	IgG1	IHC, WB
Anti-FOXM1	AMAb91766	IgG1	IHC, ICC-IF
Anti-FOXJ1	AMAb91254	IgG1	IHC*, ICC-IF
Anti-FOXJ1	AMAb91255	IgG1	IHC*
Anti-FUS	AMAb90549	IgG1	IHC*, WB*, ICC-IF
Anti-GATA3	AMAb91525	IgG2a	IHC*, WB, ICC-IF
Anti-GDF15	AMAb90687	IgG1	IHC*, WB*, ICC-IF
Anti-GLI1	AMAb91771	IgG1	WB, ICC-IF

* Enhanced Validation

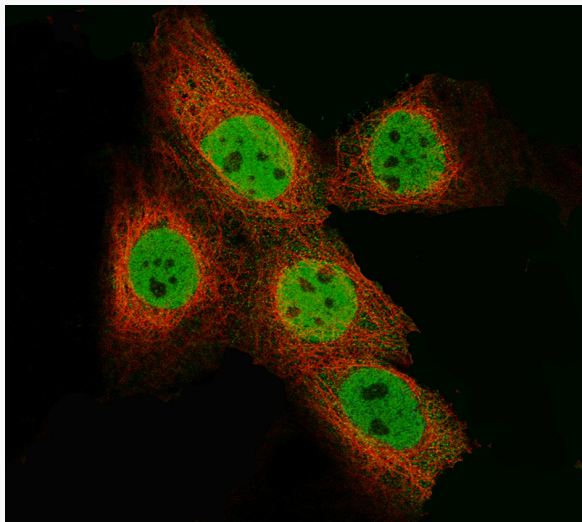


Fig.7 EZH2 (enhancer of zeste 2 polycomb repressive complex 2 subunit) is involved in the regulation of cell cycle progression and dysregulation of EZH2 accelerates cell proliferation and promotes survival, resulting in cancer development, such as colorectal, melanoma and breast cancer. The image shows immunofluorescence staining of A-431 cells using the Anti-EZH2 monoclonal antibody AMAb91750, showing specific staining in nucleoplasm in green. Microtubules are visualized in red.

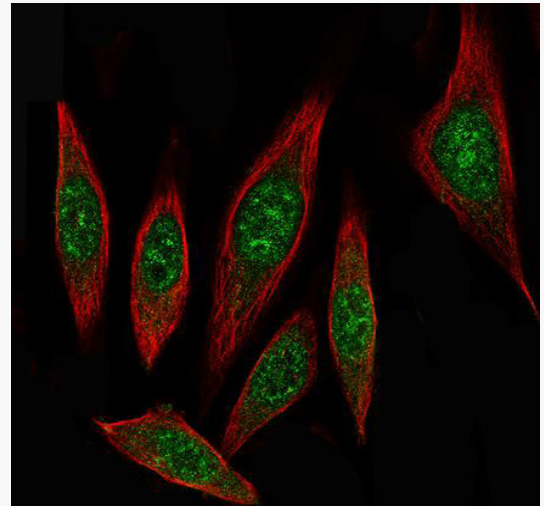


Fig.8 Inhibitor of DNA binding (ID) proteins are a class of helix-loop-helix (HLH) transcription regulatory factors that play critical roles in a wide range of tumor-associated processes, including cell differentiation, cell cycle progression, migration and invasion, epithelial-mesenchymal transition, angiogenesis, stemness, chemoresistance, tumorigenesis, and metastasis. The image shows the immunofluorescence staining of PC-3 cells using the Anti-ID1 AMAb91756 monoclonal antibody, with specific staining in nucleoplasm in green. Microtubules are visualized in red.

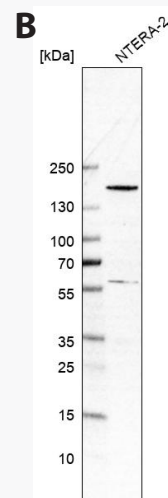
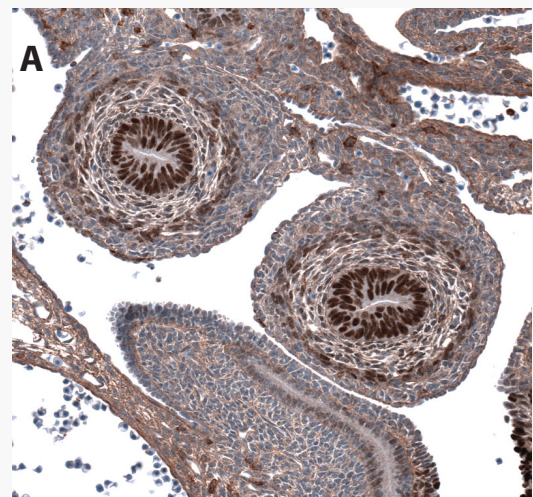


Fig.9 SALL4 (spalt like transcription factor 4) is a zinc finger transcriptional activator crucial for maintenance of self-renewal in stem cells. Along with the promising evidence of its role in self-renewal in various cancers, SALL4 may have a role in progression, development and maintenance of colorectal and testis cancers.

(A) Immunohistochemical staining of mouse embryo E11 using the Anti-SALL4 AMAb91768 monoclonal antibody with a strong nuclear positivity in the cells of developing testis.

(B) Western blot analysis in the SALL4-positive human cell line NTERA-2 using the Anti-SALL4 AMAb91768 monoclonal antibody reveals a band of expected size.

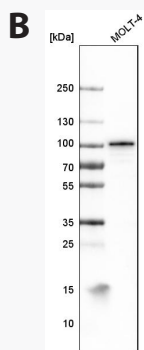
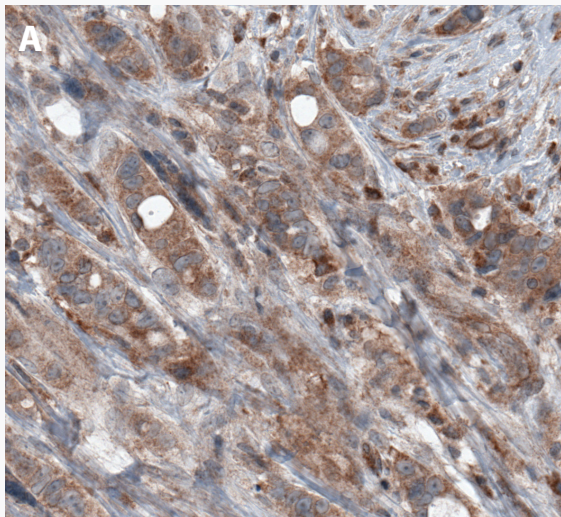


Fig.10 BRAF is a signal transduction protein kinase involved in cell division and differentiation. Mutations of BRAF gene have been found in several cancers, including melanoma, colorectal, lung, breast and brain cancers, as well as lymphoma and leukemia.

(A) The Anti-BRAF monoclonal antibody AMAb91257 shows cytoplasmic positivity in breast tumor. (B) A band of expected size is detected by Western Blot in the positive cell line MOLT-4.

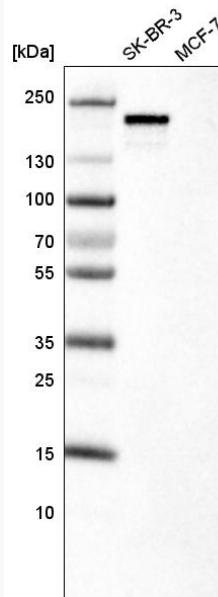
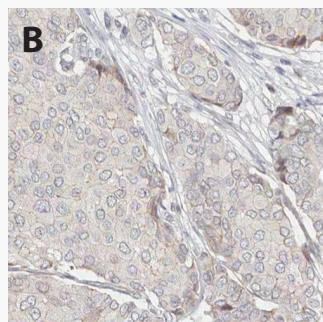
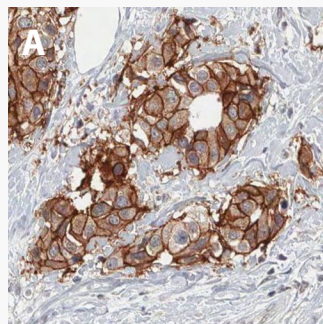


Fig.11 HER2/ERBB2 is a member of the epidermal growth factor (EGF) receptor family of receptor tyrosine kinases. Amplification and/or overexpression of this gene has been reported in numerous cancers, including breast and ovarian tumors. The Anti-HER2 monoclonal antibody AMAb90627 shows differential expression in two different breast tumors (A, B). Note also the band of predicted size in Western Blot in the HER2-positive cell line SK-BR-3 but not in the HER2-negative MCF7 cell line (C).

Product Name	Product Number	Isotype	Validated Applications
Anti-GLI1	AMAb91772	IgG1	IHC
Anti-GLI1	AMAb91773	IgG2b	IHC, ICC-IF
Anti-HDAC1	AMAb90781	IgG1	IHC*, WB*, ICC-IF
Anti-HER2	AMAb90627	IgG1	IHC, WB
Anti-HER2	AMAb90628	IgG2a	IHC, WB, ICC-IF
Anti-HMGCR	AMAb90618	IgG2a	IHC, WB*
Anti-HMGCR	AMAb90619	IgG1	IHC*, WB*
Anti-HNF1B	AMAb90733	IgG1	IHC*, WB*, ICC-IF
Anti-HMOX1	AMAb91719	IgG2a	IHC*
Anti-HMOX1	AMAb91721	IgG1	IHC*
Anti-HSP90B1	AMAb91019	IgG2b	IHC*, WB*, ICC-IF
Anti-ID1	AMAb91756	IgG1	IHC, ICC-IF
Anti-ID1	AMAb91757	IgG2a	IHC*, ICC-IF
Anti-IDH1	AMAb90578	IgG2a	IHC, WB*, ICC-IF
Anti-INSM1	AMAb91727	IgG1	IHC
Anti-ISL1	AMAb91729	IgG2a	ICC-IF
Anti-ITGAM	AMAb90911	IgG1	IHC*, WB
Anti-ITGAX	AMAb90915	IgG1	IHC*, WB
Anti-KDM5B	AMAb90860	IgG1	IHC, WB, ICC-IF
Anti-KDM5B	AMAb90861	IgG1	WB
Anti-KIT	AMAb90900	IgG1	WB
Anti-KIT	AMAb90901	IgG1	IHC, WB
Anti-KIT	AMAb90904	IgG2a	IHC, WB
Anti-LAMP1	AMAb91298	IgG3	IHC, WB
Anti-LAMP1	AMAb91299	IgG1	IHC, WB
Anti-LAMP1	AMAb91300	IgG2b	IHC, WB
Anti-LAMP1	AMAb91301	IgG2a	IHC, WB
Anti-LY6K	AMAb90986	IgG1	IHC, WB
Anti-LY6K	AMAb90987	IgG2b	IHC, ICC-IF
Anti-MACC1	AMAb90832	IgG1	IHC, ICC-IF
Anti-MCL1	AMAb90859	IgG1	IHC, WB, ICC-IF
Anti-MKI67	AMAb90870	IgG1	IHC, ICC-IF
Anti-MKL1	AMAb91285	IgG1	IHC, WB
Anti-MMP9	AMAb90806	IgG2b	IHC
Anti-MMP9	AMAb90804	IgG1	IHC, WB
Anti-MMP9	AMAb90805	IgG1	IHC, WB
Anti-MTDH	AMAb90763	IgG1	IHC, WB, ICC-IF
Anti-MTDH	AMAb90762	IgG2a	IHC, WB, ICC-IF
Anti-MUC16	AMAb91056	IgG1	IHC, ICC-IF
Anti-MUC16	AMAb91057	IgG2b	IHC
Anti-MYH6	AMAb90947	IgG1	IHC*, WB
Anti-MYH6	AMAb90948	IgG1	IHC*, WB
Anti-MYH6	AMAb90950	IgG2b	IHC*, WB
Anti-NAPRT1	AMAb90725	IgG1	IHC, WB
Anti-NAPRT1	AMAb90823	IgG1	IHC, WB
Anti-NF1	AMAb91741	IgG2b	ICC-IF
Anti-NF1	AMAb91745	IgG1	ICC-IF
Anti-OCLN	AMAb90889	IgG2a	IHC*, WB, ICC-IF
Anti-OCLN	AMAb90890	IgG2a	IHC, WB, ICC-IF
Anti-OCLN	AMAb90893	IgG1	IHC, WB, ICC-IF
Anti-OTC	AMAb91264	IgG2a	IHC*, WB, ICC-IF
Anti-OTC	AMAb91265	IgG1	IHC, WB, ICC-IF
Anti-OTC	AMAb91266	IgG1	WB
Anti-OTP	AMAb91695	IgG1	IHC
Anti-OTP	AMAb91696	IgG1	IHC, ICC-IF
Anti-P4HA2	AMAb90710	IgG1	IHC*, WB*
Anti-P53	AMAb90956	IgG1	IHC*, WB*, ICC-IF

* Enhanced Validation

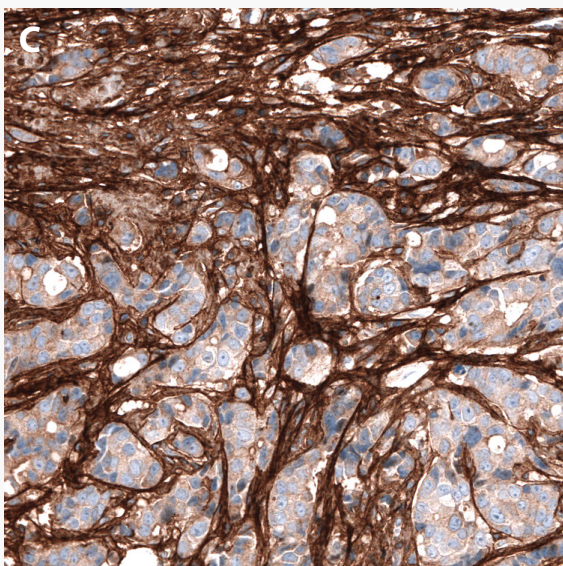
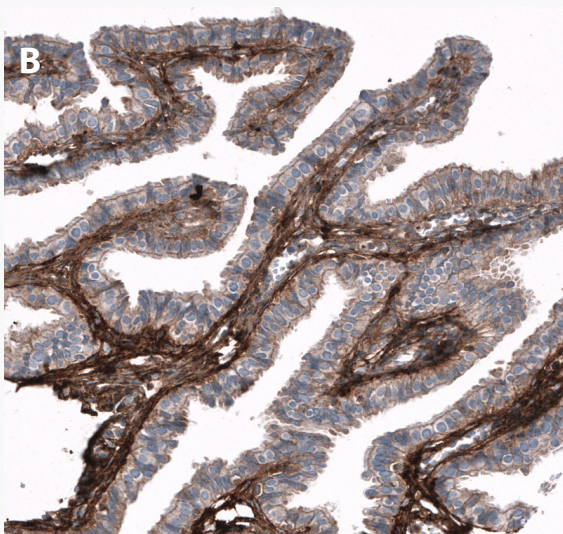
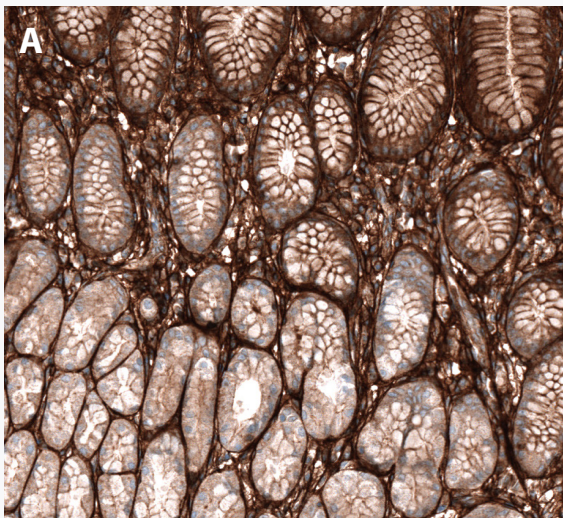


Fig.12 Periostin (POSTN) is an extracellular matrix protein and bone adhesion molecule with high expression in a variety of malignant tumor-related interstitial cells, including non-small cell lung cancer, stomach, breast cancer, ovarian cancer, and thymoma. The immunohistochemistry analysis using the Anti-POSTN AMAb91763 antibody shows strong positivity in the extracellular matrix in human stomach (A), human fallopian tube (B), and human breast cancer tissues (C).

Product Name	Product Number	Isotype	Validated Applications
Anti-PARP1	AMAb90959	IgG1	IHC, WB*, ICC-IF
Anti-PARP1	AMAb90960	IgG1	IHC, WB*
Anti-PBRM1	AMAb90690	IgG1	IHC*, WB*
Anti-PAX6	AMAb91372	IgG1	IHC, ICC-IF
Anti-PAX8	AMAb91488	IgG1	IHC, WB, ICC-IF
Anti-PCM1	AMAb90565	IgG1	IHC*, WB
Anti-PDCD1	AMAb91197	IgG1	IHC, WB
Anti-PDIA3	AMAb90988	IgG1	IHC*, WB*, ICC-IF
Anti-PDIA3	AMAb90990	IgG1	IHC, WB
Anti-PDIA3	AMAb90991	IgG2b	IHC, WB

*Enhanced Validation

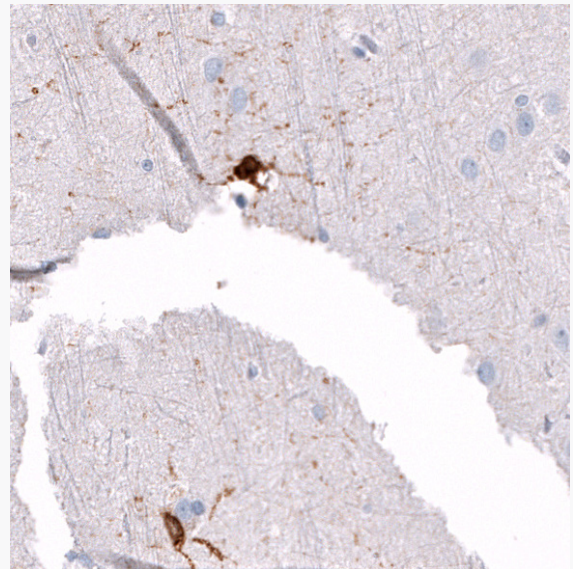


Fig.13 ALDH1A3 (aldehyde dehydrogenase 1 family member a3) is a marker for mesenchymal glioma. The immunohistochemistry on human cerebral cortex using the Anti-ALDH1A3 AMAb91754 monoclonal antibody, shows strong cytoplasmic positivity in glial cells.

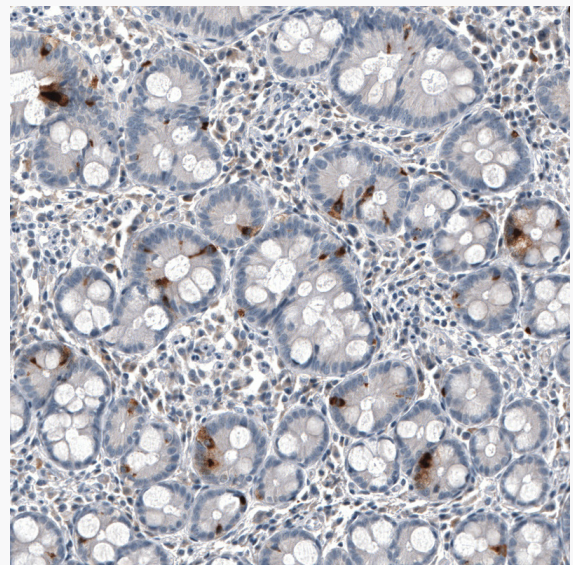


Fig.14 Chromogranin B is a marker for monitoring disease status in patients with gastroenteropancreatic neuroendocrine tumors (NETs). The immunohistochemistry analysis in human duodenum using the Anti-CHGB AMAb91710 monoclonal antibody, shows moderate cytoplasmic positivity in glandular cells.

Product Name	Product Number	Isotype	Validated Applications
Anti-PFN1	AMAb91181	IgG2a	IHC, WB*
Anti-PGAM5	AMAb90803	IgG1	IHC, WB*
Anti-PHGDH	AMAb90786	IgG1	IHC, WB, ICC-IF
Anti-PLA2R1	AMAb90772	IgG1	IHC*, WB, ICC-IF
Anti-PLA2R1	AMAb90775	IgG1	IHC, WB
Anti-PNMT	AMAb91711	IgG1	IHC*
Anti-PODXL	AMAb90667	IgG1	IHC*, WB
Anti-PODXL	AMAb90643	IgG2a	IHC*, WB, ICC-IF
Anti-PODXL	AMAb90644	IgG2b	IHC*, WB
Anti-PTEN	AMAb91735	IgG1	IHC*, WB
Anti-POSTN	AMAb91763	IgG2a	IHC*, ICC-IF
Anti-POSTN	AMAb91764	IgG2a	IHC*, ICC-IF
Anti-PTEN	AMAb91736	IgG2a	IHC*, WB
Anti-RBFOX3	AMAb91746	IgG2b	IHC*
Anti-RBFOX3	AMAb91748	IgG2b	IHC*
Anti-RBM3	AMAb90655	IgG1	IHC*, WB*, ICC-IF
Anti-RHOT1	AMAb90852	IgG1	IHC, WB
Anti-RHOT1	AMAb90854	IgG1	IHC
Anti-RIPK1	AMAb91705	IgG2a	WB
Anti-RIPK1	AMAb91706	IgG1	WB
Anti-RUNX2	AMAb90594	IgG1	IHC, WB*, ICC-IF
Anti-RUNX2	AMAb90591	IgG2a	IHC, WB*, ICC-IF
Anti-S100A4	AMAb90599	IgG1	IHC*, WB, ICC-IF
Anti-S100A4	AMAb90596	IgG1	IHC*, WB, ICC-IF
Anti-S100A4	AMAb90598	IgG2b	IHC, WB*, ICC-IF
Anti-SALL4	AMAb91768	IgG1	IHC*, WB, ICC-IF
Anti-SALL4	AMAb91769	IgG1	IHC*, WB, ICC-IF
Anti-SALL4	AMAb91770	IgG2a	ICC-IF
Anti-SATB2	AMAb90635	IgG1	IHC*, WB
Anti-SATB2	AMAb90678	IgG2a	IHC*, WB
Anti-SATB2	AMAb90679	IgG1	IHC*, WB, ICC-IF
Anti-SATB2	AMAb90680	IgG1	IHC*, WB
Anti-SATB2	AMAb90682	IgG1	IHC, WB, ICC-IF
Anti-SCGN	AMAb90632	IgG2a	IHC
Anti-SCGN	AMAb90630	IgG1	IHC, WB

* Enhanced Validation

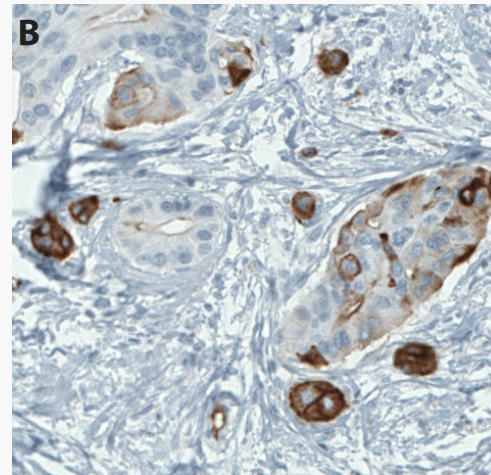
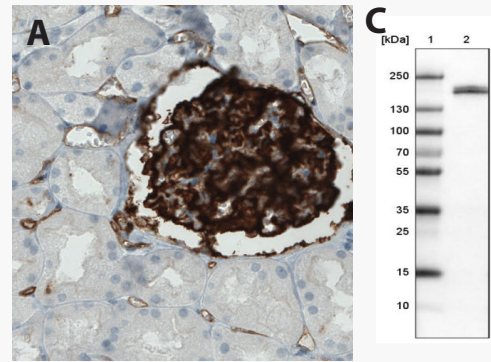


Fig.15 Podocalyxin-like protein is a member of the sialomucin protein family, originally identified as an important component of glomerular podocytes. PODXL also plays a role in cancer development and aggressiveness by inducing cell migration and invasion through its interaction with the actin-binding protein ezrin. The Anti-PODXL monoclonal antibody AMAb90644 shows strong immunoreactivity in normal renal glomeruli (A) and in a subset of invasive cancer cells in colorectal cancer tumor (B). Western blot shows band of expected molecular weight in human kidney lysate (lane 2, C).

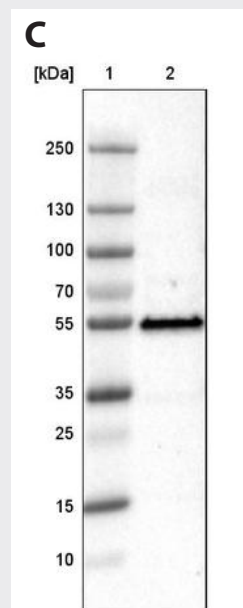
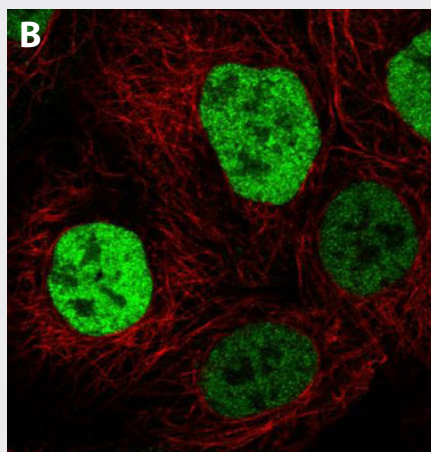
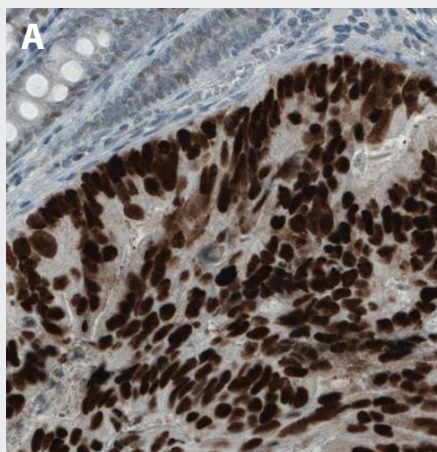


Fig.16 The TP53 gene encodes a tumor suppressor protein containing transcriptional activation, DNA binding, and oligomerization domains. Mutations in this gene are associated with a variety of human cancers, including hereditary cancers. The anti-P53 monoclonal antibody AMAb90956 shows strong nuclear expression of P53 in colorectal cancer (IHC, A), a cell cycle-dependent nuclear staining in A431 cells line (ICC-IF, B) and a band of predicted size in Western blot in positive cell line U-251 (lane 2, C).

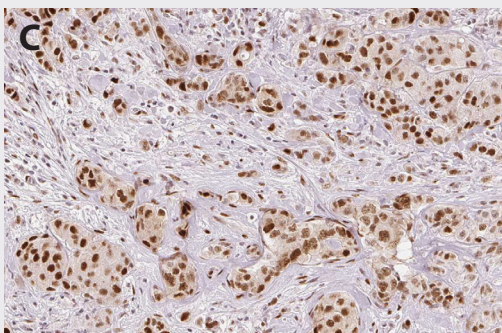
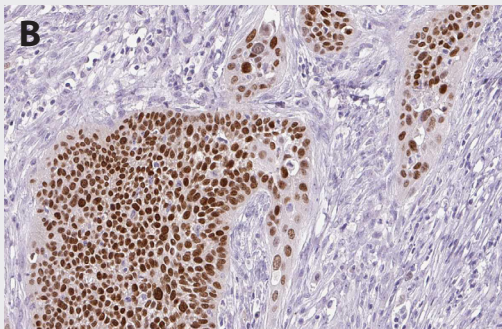
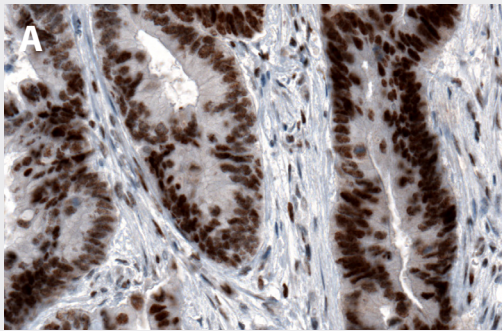


Fig. 17 A number of transcription factors are involved in reprogramming of gene expression in epithelial-to-mesenchymal transition (EMT). These IHC images show the expression of SNAI1, SIX1, and ZNF703 transcription factors in colorectal cancer (Anti-SNAI1 AMAb91215, **A**), cervical cancer (Anti-SIX1 AMAb90544, **B**), and in breast cancer (Anti-ZNF703 AMAb90789 (C)).

Product Name	Product Number	Isotype	Validated Applications
Anti-SDHB	AMAb90705	IgG2a	IHC, WB
Anti-SDHB	AMAb90706	IgG1	IHC, WB
Anti-SDHB	AMAb90708	IgG1	IHC, WB*, ICC-IF
Anti-SIX1	AMAb90544	IgG1	IHC, WB*, ICC-IF
Anti-SNAI1	AMAb91215	IgG1	IHC*, ICC-IF
Anti-SIX1	AMAb90544	IgG1	IHC, WB*, ICC-IF
Anti-SNAI1	AMAb91215	IgG1	IHC*, ICC-IF
Anti-SOX10	AMAb91297	IgG1	IHC, ICC-IF
Anti-SOX11	AMAb90501	IgG2a	IHC, WB*, ICC-IF
Anti-SOX11	AMAb90502	IgG2a	IHC, WB
Anti-SOX2	AMAb91307	IgG1	IHC, WB*, ICC-IF
Anti-SOX21	AMAb91309	IgG1	IHC, WB
Anti-SOX21	AMAb91311	IgG2a	IHC, WB, ICC-IF
Anti-SOX9	AMAb90795	IgG2a	IHC*, WB*, ICC-IF
Anti-SSX2	AMAb91141	IgG1	IHC
Anti-ST13	AMAb91218	IgG1	IHC, WB
Anti-STAT3	AMAb90776	IgG1	IHC, WB*
Anti-STAT3	AMAb90777	IgG1	IHC*, WB*, ICC-IF
Anti-STX7	AMAb90616	IgG1	IHC, WB, ICC-IF
Anti-TG	AMAb90523	IgG2b	IHC, WB
Anti-TLE3	AMAb91188	IgG1	IHC, WB*, ICC-IF
Anti-TP63	AMAb91224	IgG1	IHC, WB*
Anti-TSPAN7	AMAb90621	IgG1	IHC, WB
Anti-TSPAN7	AMAb90624	IgG1	IHC
Anti-VANGL1	AMAb90600	IgG1	WB*, ICC-IF
Anti-VIM	AMAb90516	IgG1	IHC, WB*
Anti-VWF	AMAb90928	IgG2a	IHC, WB
Anti-VWF	AMAb90931	IgG1	IHC, WB
Anti-WHSC1/NSD2	AMAb90848	IgG1	IHC, ICC-IF
Anti-WHSC1/NSD2	AMAb90851	IgG2b	IHC, WB, ICC-IF
Anti-WWTR1	AMAb90729	IgG1	WB, ICC-IF
Anti-WWTR1	AMAb90730	IgG1	IHC*, WB*, ICC-IF
Anti-ZEB1	AMAb90510	IgG1	IHC, WB*, ICC-IF
Anti-ZNF703	AMAb90789	IgG1	IHC, WB*

* *Enhanced Validation*

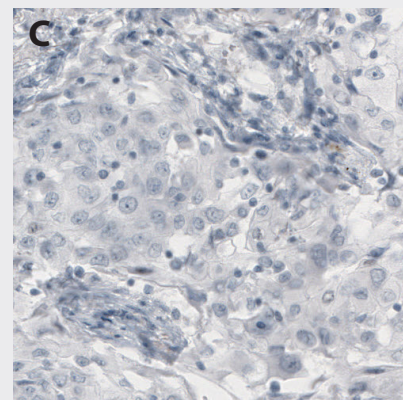
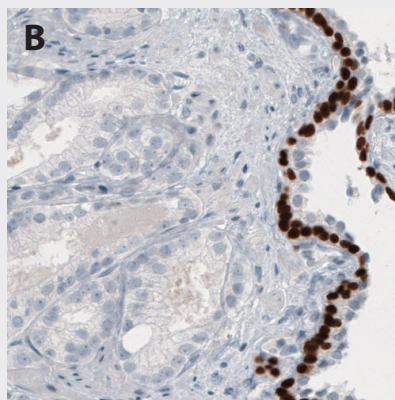
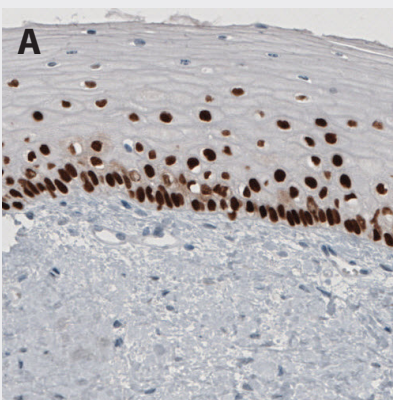


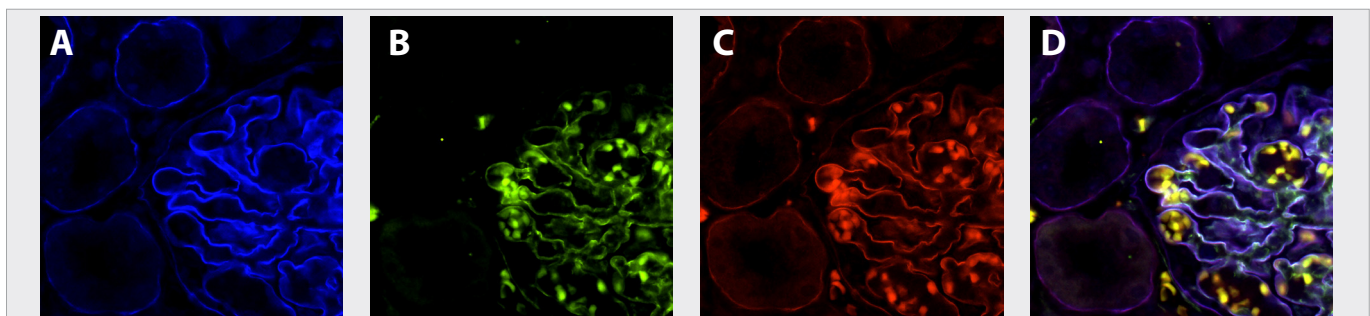
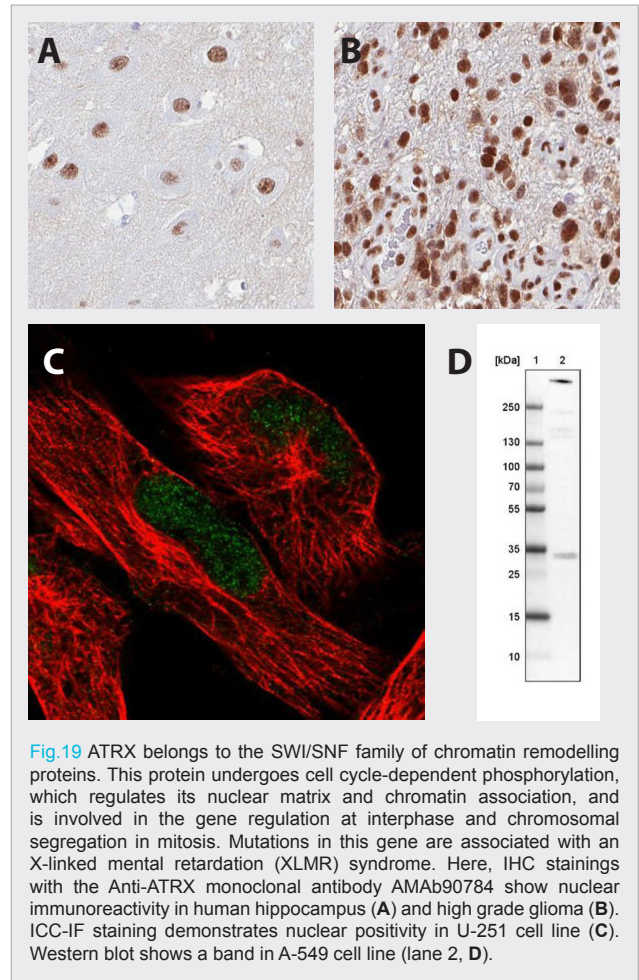
Fig. 18 TP 63 gene encodes a member of the p53 family of transcription factors, which play role in development and maintenance of stratified epithelial tissues. Normally, the protein is expressed in the basal cell layer of several epithelia. The antibody can be used for e.g. differentiation of benign prostate lesions and adenocarcinoma.

Here, in brown, the Anti-TP63 monoclonal antibody AMAb91224 shows strong nuclear immunoreactivity in normal human cervix epithelium (**A**) and prostate epithelium (**B**), while immunoreactivity is absent in adjacent prostate tumor cells. Lung adenocarcinoma was used as a negative control (**C**).

PrecisA Monoclonals in Development & Stem Cells

Product Name	Product Number	Isotype	Validated Applications
Anti-ACTB	AMAb91241	IgG1	IHC, WB, ICC-IF
Anti-ADGRL4	AMAb91268	IgG1	IHC, WB
Anti-AKT1	AMAb90834	IgG1	WB, ICC-IF
Anti-AKT1	AMAb90835	IgG1	WB
Anti-ARID1A	AMAb91192	IgG1	IHC, WB, ICC-IF
Anti-ATRX	AMAb90784	IgG1	IHC, WB*, ICC-IF
Anti-C10orf54/VSIR	AMAb91252	IgG1	IHC, WB
Anti-C10orf54/VSIR	AMAb91253	IgG1	IHC
Anti-CDK5RAP2	AMAb91163	IgG1	IHC, ICC-IF
Anti-CEP350	AMAb91164	IgG1	IHC, ICC-IF
Anti-CTCF	AMAb90663	IgG2a	IHC, WB*, ICC-IF
Anti-CTCF	AMAb90664	IgG1	IHC, WB, ICC-IF
Anti-CTCF	AMAb90666	IgG2b	IHC, WB, ICC-IF
Anti-CTNNB1	AMAb91209	IgG2a	IHC, WB, ICC-IF
Anti-CTNNB1	AMAb91210	IgG1	IHC, WB, ICC-IF
Anti-DIAPH2	AMAb90856	IgG1	IHC, WB*
Anti-DIAPH2	AMAb90857	IgG1	IHC, WB*
Anti-ENG	AMAb90925	IgG1	IHC
Anti-ESR1	AMAb90867	IgG1	IHC, WB*, ICC-IF
Anti-FLT1	AMAb90704	IgG2b	IHC*, WB
Anti-FLT1	AMAb90703	IgG1	IHC*
Anti-FN1	AMAb91223	IgG1	IHC, WB
Anti-FOXJ1	AMAb91254	IgG1	IHC*, ICC-IF
Anti-FOXJ1	AMAb91255	IgG1	IHC*
Anti-FUS	AMAb90549	IgG1	IHC*, WB*, ICC-IF
Anti-GDF15	AMAb90687	IgG1	IHC*, WB*, ICC-IF
Anti-GLUL	AMAb91101	IgG1	IHC, WB*
Anti-GLUL	AMAb91102	IgG1	IHC, WB*
Anti-GLUL	AMAb91103	IgG2a	IHC, WB
Anti-GRHL2	AMAb91226	IgG1	IHC*, ICC-IF
Anti-HDAC1	AMAb90781	IgG1	IHC*, WB*, ICC-IF
Anti-HNF1B	AMAb90733	IgG1	IHC*, WB*, ICC-IF
Anti-LAMA1	AMAb91091	IgG1	IHC, WB
Anti-LAMA1	AMAb91117	IgG1	IHC*, WB
Anti-LAMA2	AMAb91166	IgG1	IHC*, WB
Anti-LAMA3	AMAb91123	IgG1	IHC, WB
Anti-LAMA4	AMAb91133	IgG2b	IHC, WB
Anti-LAMA4	AMAb91134	IgG1	IHC*, WB

* Enhanced Validation



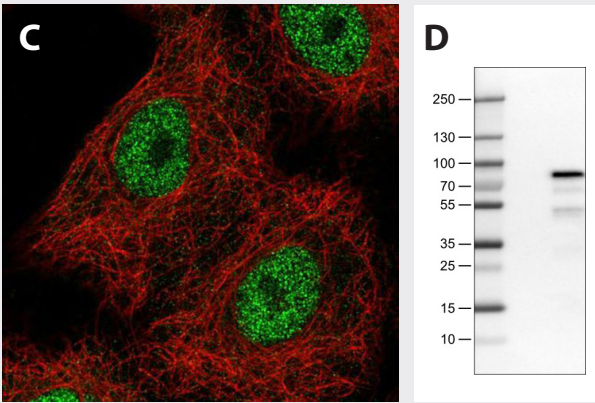
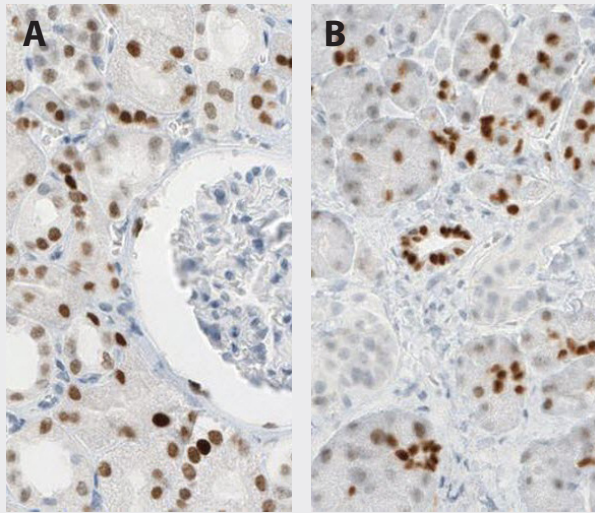


Fig.21 HNF1B is a member of the homeodomain-containing superfamily of transcription factors. This protein has been shown to function in nephron development and to regulate development of the embryonic pancreas. IHC staining with the Anti-HNF1B antibody AMAb90733 shows nuclear immunoreactivity in renal tubules (A) and pancreas (B), as well as positivity in A549 cell line (ICC-IF, C). Note also a band of expected molecular weight in HNF1B over-expressing HEK239T cells (D).

Product Name	Product Number	Isotype	Validated Applications
Anti-LAMA5	AMAb91124	IgG1	IHC*, WB*
Anti-LAMB1	AMAb91092	IgG1	IHC, WB
Anti-LAMB2	AMAb91096	IgG1	IHC, WB*
Anti-LAMB2	AMAb91097	IgG2a	IHC*, WB
Anti-LAMB3	AMAb91160	IgG1	IHC*, WB, ICC-IF
Anti-LAMB3	AMAb91161	IgG1	IHC*, WB
Anti-LAMC1	AMAb91136	IgG2b	IHC, WB
Anti-LAMC1	AMAb91137	IgG1	IHC, WB
Anti-LAMC1	AMAb91138	IgG2b	IHC*, WB
Anti-LAMC1	AMAb91140	IgG1	IHC, WB
Anti-LAMC2	AMAb91098	IgG1	IHC*, WB*, ICC-IF
Anti-MCL1	AMAb90859	IgG1	IHC, WB, ICC-IF
Anti-MEF2C	AMAb90728	IgG1	IHC, WB, ICC-IF
Anti-MEF2C	AMAb90727	IgG1	IHC, WB*, ICC-IF
Anti-METTL14	AMAb91275	IgG2a	IHC*, WB, ICC-IF
Anti-METTL14	AMAb91276	IgG1	IHC, WB, ICC-IF
Anti-MKL1	AMAb91285	IgG1	IHC, WB
Anti-MKL2	AMAb90887	IgG1	WB, ICC-IF
Anti-MMP9	AMAb90806	IgG2b	IHC
Anti-MMP9	AMAb90804	IgG1	IHC, WB
Anti-MMP9	AMAb90805	IgG1	IHC, WB
Anti-MYH6	AMAb90947	IgG1	IHC*, WB
Anti-MYH6	AMAb90948	IgG1	IHC*, WB
Anti-MYH6	AMAb90950	IgG2b	IHC*, WB
Anti-NES	AMAb90556	IgG1	IHC, WB*, ICC-IF
Anti-OTC	AMAb91264	IgG2a	IHC*, WB, ICC-IF
Anti-OTC	AMAb91265	IgG1	IHC, WB, ICC-IF
Anti-OTC	AMAb91266	IgG1	WB
Anti-PHGDH	AMAb90786	IgG1	IHC, WB, ICC-IF
Anti-PPIB	AMAb91245	IgG2a	IHC*, WB*
Anti-PPIB	AMAb91249	IgG2b	WB*
Anti-PRRT2	AMAb91273	IgG1	IHC
Anti-REST	AMAb90740	IgG1	IHC, ICC-IF

* Enhanced Validation

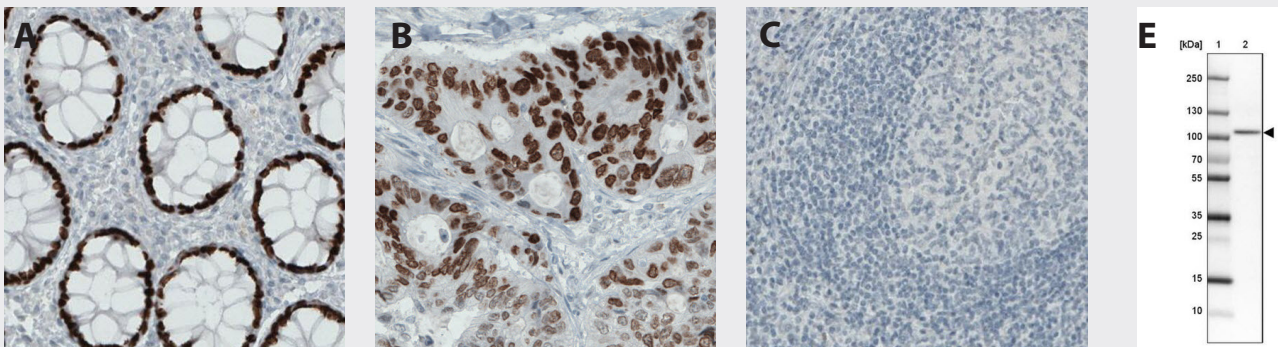


Fig.22 SATB2 is a DNA binding protein that specifically binds nuclear matrix attachment regions. SATB2 is involved in transcription regulation and chromatin remodelling and has been shown to play role in e.g. cortical neuron development. In addition, SATB2 is highly expressed in lower gastrointestinal tract and can be used a marker to distinguish colorectal cancer from other cell types.

The IHC staining with the Anti-SATB2 antibody AMAb90679 shows strong nuclear immunoreactivity in human rectum (A) and colorectal cancer (B). A negative staining was confirmed in human tonsil (C) used as negative control. In the rat brain, SATB2 is expressed in both cerebral cortex and CA1 layer of the hippocampus, while the protein is absent in CA3 and dentate gyrus neurons (D). In western blot, a band of expected molecular weight is shown using the SATB2-positive cell line HEL (lane 2, E).

Product Name	Product Number	Isotype	Validated Applications
Anti-RUNX2	AMAb90594	IgG1	IHC, WB*, ICC-IF
Anti-RUNX2	AMAb90591	IgG2a	IHC, WB*, ICC-IF
Anti-SATB2	AMAb90635	IgG1	IHC*, WB
Anti-SATB2	AMAb90678	IgG2a	IHC*, WB
Anti-SATB2	AMAb90679	IgG1	IHC*, WB, ICC-IF
Anti-SATB2	AMAb90680	IgG1	IHC*, WB
Anti-SATB2	AMAb90682	IgG1	IHC, WB, ICC-IF
Anti-SIX1	AMAb90544	IgG1	IHC, WB*, ICC-IF
Anti-SMCHD1	AMAb91280	IgG1	IHC, ICC-IF
Anti-SMCHD1	AMAb91282	IgG2b	IHC, ICC-IF
Anti-SNAI1	AMAb91215	IgG1	IHC*, ICC-IF
Anti-SOX10	AMAb91297	IgG1	IHC, ICC-IF
Anti-SOX11	AMAb90501	IgG2a	IHC, WB*, ICC-IF
Anti-SOX11	AMAb90502	IgG2a	IHC, WB
Anti-SOX2	AMAb91307	IgG1	IHC, WB*, ICC-IF
Anti-SOX21	AMAb91309	IgG1	IHC, WB
Anti-SOX21	AMAb91311	IgG2a	IHC, WB, ICC-IF
Anti-SOX3	AMAb91312	IgG1	WB
Anti-SOX9	AMAb90795	IgG2a	IHC*, WB*, ICC-IF
Anti-STAT3	AMAb90776	IgG1	IHC, WB*
Anti-STAT3	AMAb90777	IgG1	IHC*, WB*, ICC-IF
Anti-THSD7A	AMAb91233	IgG1	IHC*
Anti-THSD7A	AMAb91234	IgG1	IHC*
Anti-TP63	AMAb91224	IgG1	IHC, WB*
Anti-TSPAN7	AMAb90621	IgG1	IHC, WB
Anti-TSPAN7	AMAb90624	IgG1	IHC
Anti-VANGL1	AMAb90600	IgG1	WB*, ICC-IF
Anti-WHSC1/NSD2	AMAb90848	IgG1	IHC, ICC-IF
Anti-WHSC1/NSD2	AMAb90851	IgG2b	IHC, WB, ICC-IF
Anti-ZEB1	AMAb90510	IgG1	IHC, WB*, ICC-IF

* Enhanced Validation

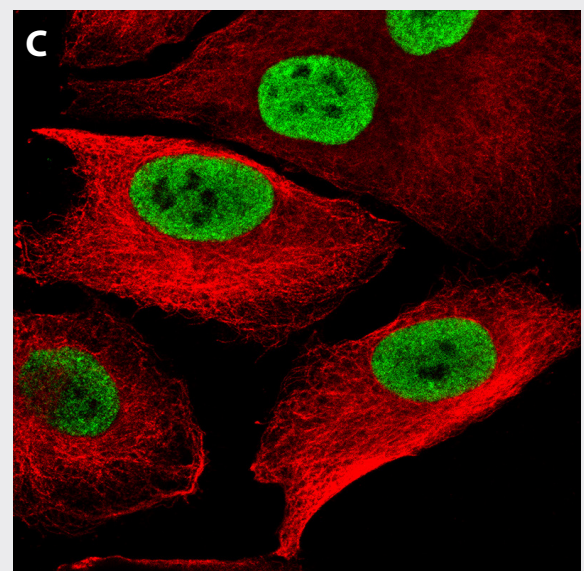
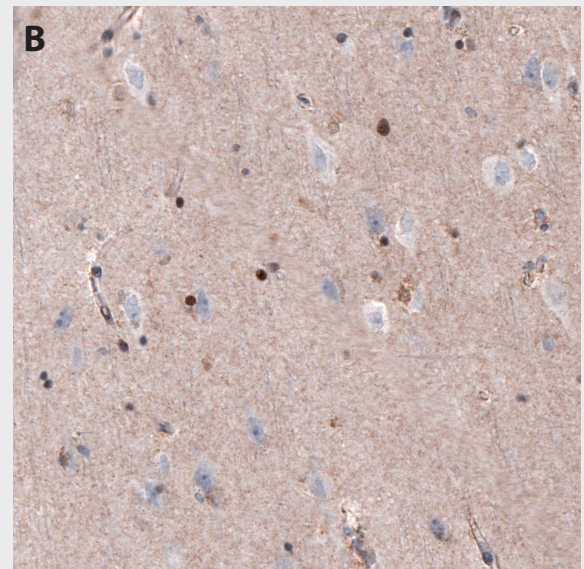
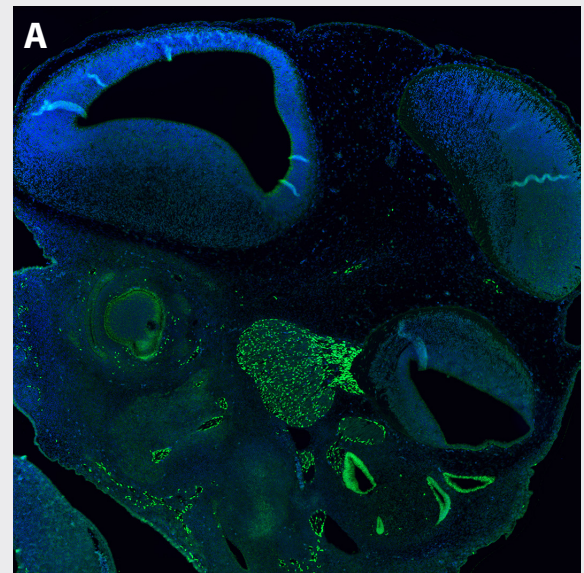
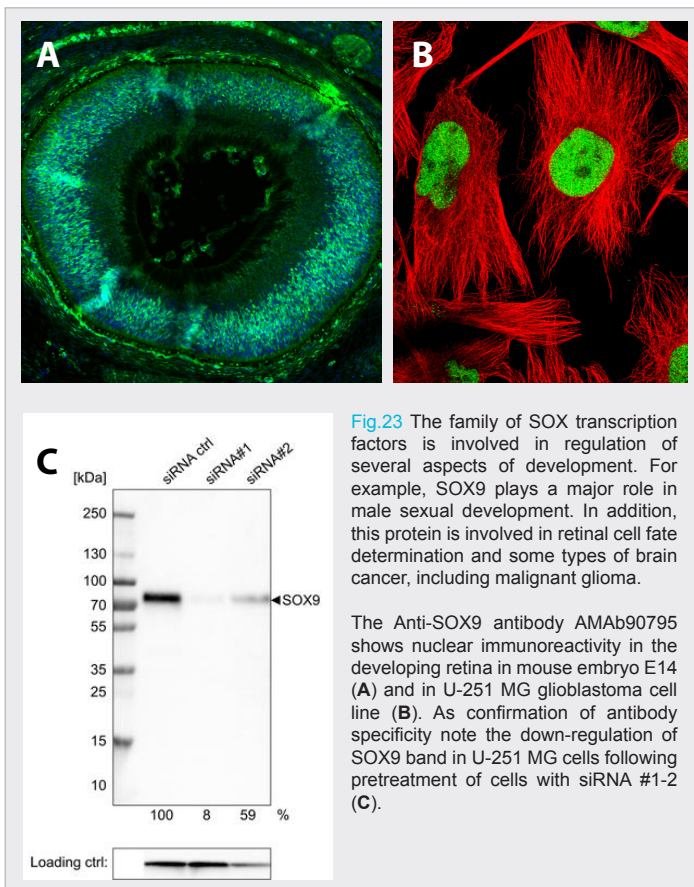


Fig.24 SOX10 is a crucially important protein for the development of the neural crest and peripheral nervous system, as well as for formation of oligodendrocytes in the central nervous system.

The Anti-SOX10 monoclonal antibody AMAb91297 shows immunoreactivity in a subset of cells in the developing trigeminal ganglion and ear placode in mouse embryo E11 (A), in oligodendrocytes in human cerebral cortex (B) and in skin cancer cell line WM-115 (C).

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Product Name	Product Number	Isotype	Validated Applications
Anti-ADAR	AMAb90535	IgG1	IHC, WB*, ICC-IF
Anti-ADGRL4	AMAb91268	IgG1	IHC, WB
Anti-AKT1	AMAb90834	IgG1	WB, ICC-IF
Anti-AKT1	AMAb90835	IgG1	WB
Anti-APOA4	AMAb90767	IgG2a	IHC, WB
Anti-APOA4	AMAb90768	IgG1	IHC, WB
Anti-APOA4	AMAb90769	IgG1	IHC, WB
Anti-AQP4	AMAb90537	IgG1	IHC*, WB
Anti-ATF3	AMAb90909	IgG1	IHC*, ICC-IF
Anti-ATRX	AMAb90784	IgG1	IHC, WB*, ICC-IF
Anti-CD4	AMAb90754	IgG1	IHC*, WB
Anti-CD40	AMAb90905	IgG1	IHC*, WB
Anti-CD45	AMAb90519	IgG2a	IHC, WB
Anti-CD45	AMAb90518	IgG1	IHC, WB
Anti-CD68	AMAb90873	IgG1	IHC
Anti-CD68	AMAb90874	IgG1	IHC, WB*
Anti-CHAT	AMAb91129	IgG1	IHC*
Anti-CHAT	AMAb91130	IgG2b	IHC*, ICC-IF
Anti-CHGA	AMAb90525	IgG1	IHC, WB, ICC-IF
Anti-CNP	AMAb91068	IgG2a	IHC, WB*
Anti-CNP	AMAb91069	IgG1	IHC, WB
Anti-CNP	AMAb91072	IgG2b	IHC, WB, ICC-IF
Anti-DAT	AMAb91125	IgG1	IHC
Anti-DDC	AMAb91089	IgG1	IHC*, WB
Anti-ENG	AMAb90925	IgG1	IHC
Anti-EZR	AMAb90975	IgG1	IHC, WB, ICC-IF
Anti-EZR	AMAb90976	IgG1	IHC*, WB*, ICC-IF
Anti-EZR	AMAb90977	IgG2b	IHC, WB, ICC-IF
Anti-EZR	AMAb90979	IgG2b	IHC, WB, ICC-IF
Anti-FABP7	AMAb90595	IgG1	IHC, WB
Anti-FLT1	AMAb90704	IgG2b	IHC*, WB
Anti-FLT1	AMAb90703	IgG1	IHC*
Anti-FUS	AMAb90549	IgG1	IHC*, WB*, ICC-IF
Anti-GAD1	AMAb91076	IgG2a	IHC, WB
Anti-GAD1	AMAb91078	IgG1	IHC, WB
Anti-GAD1	AMAb91079	IgG2b	IHC, WB
Anti-GAD2	AMAb91048	IgG1	IHC*, WB
Anti-GFAP	AMAb91033	IgG1	IHC, WB*
Anti-GLUL	AMAb91101	IgG1	IHC, WB*
Anti-GLUL	AMAb91102	IgG1	IHC, WB*
Anti-GLUL	AMAb91103	IgG2a	IHC, WB
Anti-ITGAM	AMAb90911	IgG1	IHC*, WB
Anti-MBP	AMAb91062	IgG2a	IHC, WB, ICC-IF
Anti-MBP	AMAb91063	IgG1	IHC, WB, ICC-IF
Anti-MBP	AMAb91064	IgG1	IHC, WB
Anti-MEF2C	AMAb90728	IgG1	IHC, WB, ICC-IF
Anti-MEF2C	AMAb90727	IgG1	IHC, WB*, ICC-IF
Anti-MKI67	AMAb90870	IgG1	IHC, ICC-IF
Anti-MOG	AMAb91066	IgG1	IHC, WB
Anti-MOG	AMAb91067	IgG1	IHC, WB
Anti-NECAB1	AMAb90798	IgG1	IHC, WB
Anti-NECAB1	AMAb90800	IgG2a	IHC, WB
Anti-NECAB1	AMAb90801	IgG2b	IHC, WB

* Enhanced Validation

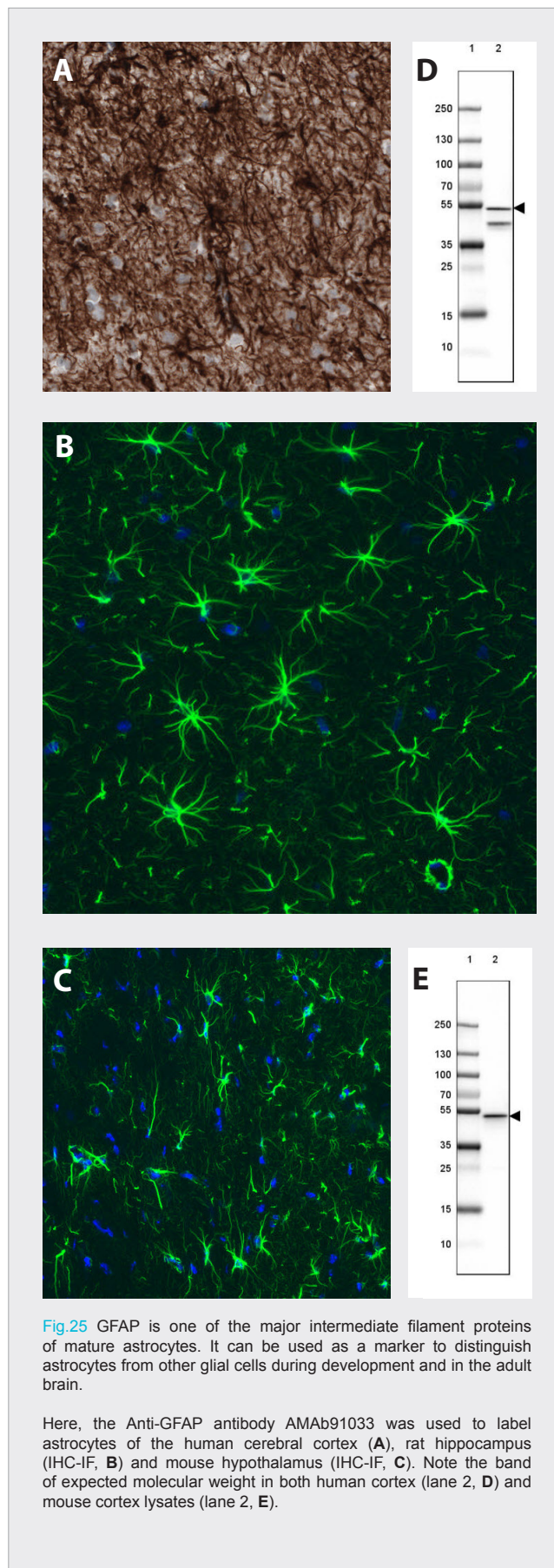


Fig.25 GFAP is one of the major intermediate filament proteins of mature astrocytes. It can be used as a marker to distinguish astrocytes from other glial cells during development and in the adult brain.

Here, the Anti-GFAP antibody AMAb91033 was used to label astrocytes of the human cerebral cortex (**A**), rat hippocampus (IHC-IF, **B**) and mouse hypothalamus (IHC-IF, **C**). Note the band of expected molecular weight in both human cortex (lane 2, **D**) and mouse cortex lysates (lane 2, **E**).

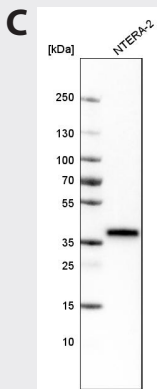
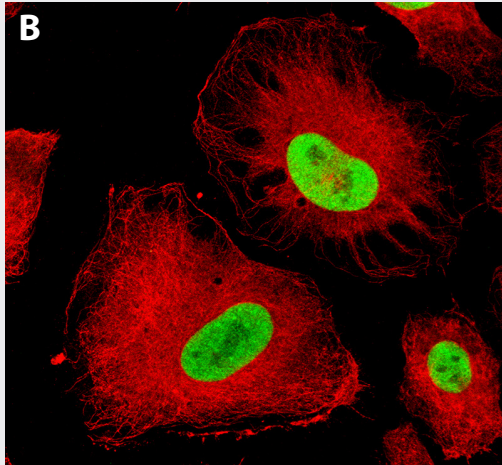
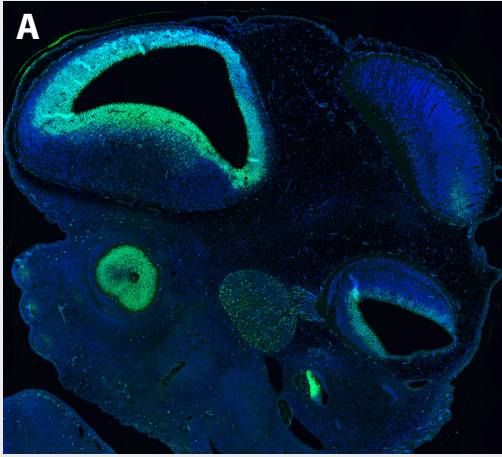


Fig.26 SOX2 transcription factor is crucially important for the development and is involved in the pluripotency of cells. It is expressed in the developing nervous system, in the neural tube and in the neural progenitors.

The ICC-IF staining using the Anti-SOX2 monoclonal antibody AMAb91307 shows nuclear positivity in the developing forebrain and eye of mouse embryo E11 (A) and in the U-251 cell line (B). Note also the expected size band of SOX2 detected by Western Blot in the NTERA-2 cell line (C).

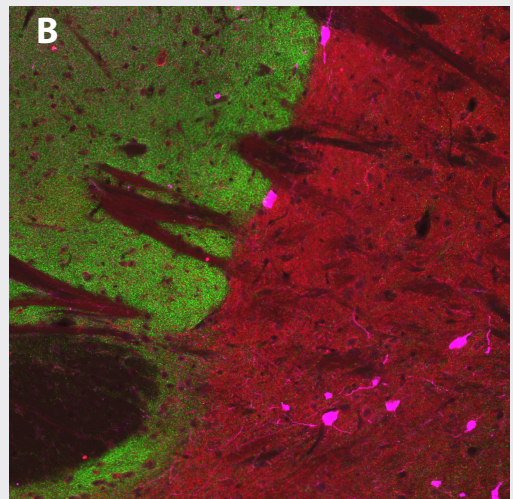
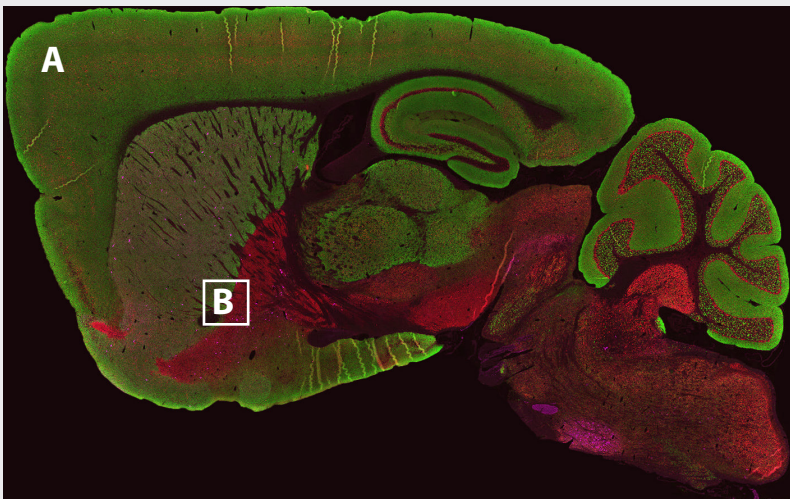
Product Name	Product Number	Isotype	Validated Applications
Anti-NECAB2	AMAb90808	IgG1	IHC
Anti-NEFH	AMAb91025	IgG1	IHC, WB
Anti-NEFL	AMAb91314	IgG1	IHC, WB, ICC-IF
Anti-NEFM	AMAb91027	IgG1	IHC, WB
Anti-NEFM	AMAb91028	IgG1	IHC, WB
Anti-NEFM	AMAb91029	IgG2a	IHC, WB
Anti-NEFM	AMAb91030	IgG2b	IHC, WB
Anti-NES	AMAb90556	IgG1	IHC, WB*, ICC-IF
Anti-NET	AMAb91116	IgG1	IHC
Anti-PFN1	AMAb91181	IgG2a	IHC, WB*
Anti-PHGDH	AMAb90786	IgG1	IHC, WB, ICC-IF
Anti-PRRT2	AMAb91273	IgG1	IHC
Anti-REST	AMAb90740	IgG1	IHC, ICC-IF
Anti-RHOT1	AMAb90852	IgG1	IHC, WB
Anti-RHOT1	AMAb90854	IgG1	IHC
Anti-RUNX2	AMAb90594	IgG1	IHC, WB*, ICC-IF
Anti-RUNX2	AMAb90591	IgG2a	IHC, WB*, ICC-IF
Anti-S100B	AMAb91038	IgG1	IHC*, WB
Anti-SATB2	AMAb90635	IgG1	IHC*, WB
Anti-SATB2	AMAb90678	IgG2a	IHC*, WB
Anti-SATB2	AMAb90679	IgG1	IHC*, WB, ICC-IF
Anti-SATB2	AMAb90680	IgG1	IHC*, WB
Anti-SATB2	AMAb90682	IgG1	IHC, WB, ICC-IF
Anti-SCGN	AMAb90630	IgG1	IHC, WB
Anti-SCGN	AMAb90632	IgG2a	IHC
Anti-SLC22A2	AMAb90791	IgG1	IHC*
Anti-SLC22A2	AMAb90792	IgG2b	IHC*
Anti-SOX2	AMAb91307	IgG1	IHC, WB*, ICC-IF

* *Enhanced Validation*

Fig.27 Multiplexed IHC-IF staining of a sagittal section of mouse brain showing the GABAergic system in red, glutamatergic system in green and acetylcholine system in magenta by using isotype-specific secondary antibodies (A).

The Anti-GAD1 antibody AMAb91076 was used to visualize the GABAergic system, the Anti-VGLUT1 antibody AMAb9104 was used for the glutamatergic system and the Anti-CHAT antibody AMAb91129 was used for the acetylcholine system.

The Inset (B) shows a high-power image of the boxed area. Note the acetylcholine neuronal cell bodies in the basal forebrain (in magenta).



Product Name	Product Number	Isotype	Validated Applications
Anti-SOX10	AMAb91297	IgG1	IHC, ICC-IF
Anti-SOX11	AMAb90501	IgG2a	IHC, WB*, ICC-IF
Anti-SOX11	AMAb90502	IgG2a	IHC, WB
Anti-SOX21	AMAb91309	IgG1	IHC, WB
Anti-SOX21	AMAb91311	IgG2a	IHC, WB, ICC-IF
Anti-SOX3	AMAb91312	IgG1	WB
Anti-SOX9	AMAb90795	IgG2a	IHC*, WB*, ICC-IF
Anti-TH	AMAb91112	IgG1	IHC
Anti-THY1	AMAb90844	IgG2b	IHC, WB
Anti-THY1	AMAb90846	IgG1	IHC, WB
Anti-TPH2	AMAb91108	IgG1	IHC
Anti-TSPAN7	AMAb90621	IgG1	IHC, WB
Anti-TSPAN7	AMAb90624	IgG1	IHC
Anti-TTR	AMAb90649	IgG1	IHC*, WB
Anti-UCHL1	AMAb91145	IgG1	IHC, WB, ICC-IF
Anti-USP30	AMAb91295	IgG2a	IHC
Anti-USP46	AMAb90723	IgG2a	WB, ICC-IF
Anti-USP46	AMAb90722	IgG2b	WB*, ICC-IF
Anti-VANGL1	AMAb90600	IgG1	WB*, ICC-IF
Anti-VGAT	AMAb91043	IgG1	IHC
Anti-VGLUT1	AMAb91041	IgG2b	IHC*, WB
Anti-VGLUT2	AMAb91081	IgG1	IHC*
Anti-VGLUT2	AMAb91086	IgG1	IHC*
Anti-VIM	AMAb90516	IgG1	IHC, WB*
Anti-VPS26A	AMAb90967	IgG1	IHC*, WB*, ICC-IF
Anti-VWF	AMAb90928	IgG2a	IHC, WB
Anti-VWF	AMAb90931	IgG1	IHC, WB
Anti-WHSC1/NSD2	AMAb90848	IgG1	IHC, ICC-IF
Anti-WHSC1/NSD2	AMAb90851	IgG2b	IHC, WB, ICC-IF

* Enhanced Validation

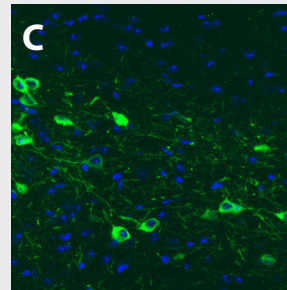
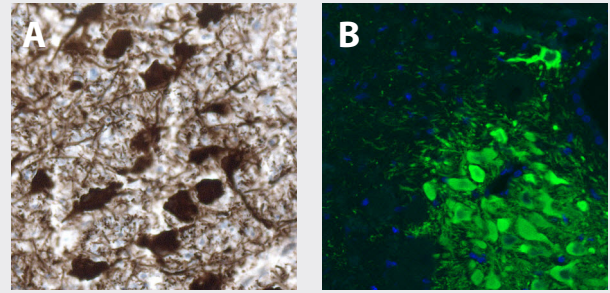


Fig.28 Tyrosine hydroxylase is involved in the conversion of tyrosine to dopamine. It is the rate-limiting enzyme in the synthesis of catecholamine neurotransmitters, which plays a key role in the physiology of noradrenergic and dopaminergic neurons. The Anti-TH monoclonal antibody AMAb91112 shows strong immunoreactivity in the noradrenergic neurons of human and rat locus coeruleus (A,B), and in the mouse paraventricular hypothalamic nucleus (C).

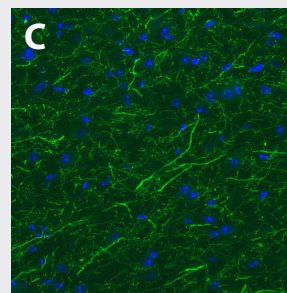
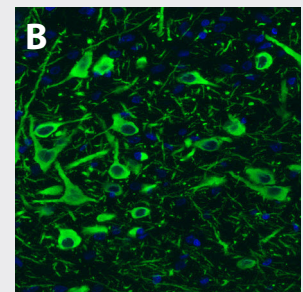
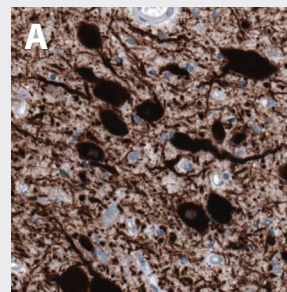


Fig.29 Tryptophan hydroxylase 2 catalyses the first and rate limiting step in the biosynthesis of serotonin, an important hormone and neurotransmitter, involved in a number of psychiatric diseases, such as major depression and bipolar disorder. The Anti-TPH2 antibody AMAb91108 shows strong positivity in the serotonergic neurons of the human and rat dorsal raphe (A, B), as well as in the serotonergic processes of the mouse basal forebrain (C).

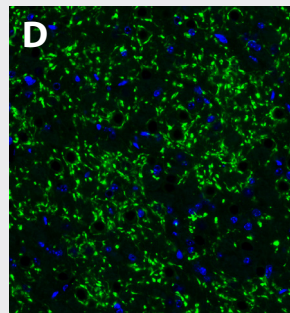
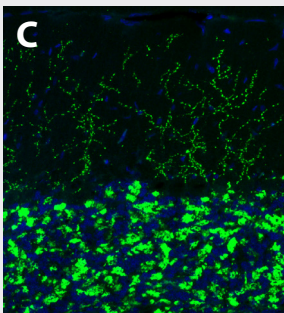
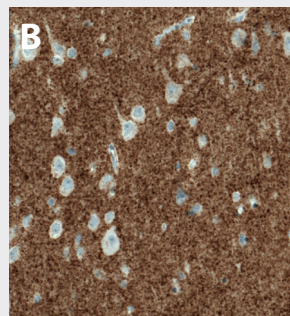
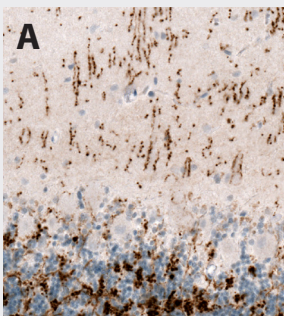


Fig.30 VGLUT2 is a transporter that mediates the uptake of glutamate into synaptic vesicles at the presynaptic nerve terminals of excitatory glutamatergic neurons. The Anti-VGLUT2 monoclonal antibody AMAb91081 shows strong positivity in glutamatergic fibers in human cerebellum (A), human cerebral cortex (B), rat cerebellum (C) and mouse thalamus (D).

PrecisA Monoclonals in Cell Biology

Product Name	Product Number	Isotype	Validated Applications
Anti-ABCD3	AMAb90995	IgG1	IHC*, ICC-IF
Anti-ACAA1	AMAb91020	IgG1	IHC, WB*, ICC-IF
Anti-ACAA1	AMAb91022	IgG2b	IHC, WB*, ICC-IF
Anti-ACAA1	AMAb91023	IgG1	IHC, WB*, ICC-IF
Anti-ACAA1	AMAb91024	IgG2a	IHC, WB*, ICC-IF
Anti-ACE2	AMAb91259	IgG1	IHC*, WB
Anti-ACE2	AMAb91262	IgG1	IHC*, WB
Anti-ACTB	AMAb91241	IgG1	IHC, WB, ICC-IF
Anti-ANLN	AMAb90660	IgG1	IHC*, WB, ICC-IF
Anti-ANLN	AMAb90662	IgG1	IHC*, WB*, ICC-IF
Anti-APOA4	AMAb90767	IgG2a	IHC, WB
Anti-APOA4	AMAb90768	IgG1	IHC, WB
Anti-APOA4	AMAb90769	IgG1	IHC, WB
Anti-APOL1	AMAb90530	IgG1	IHC, WB
Anti-APOL1	AMAb90529	IgG1	WB
Anti-APOL1	AMAb90532	IgG1	WB
Anti-AQP4	AMAb90537	IgG1	IHC*, WB
Anti-CARS	AMAb90970	IgG1	IHC, WB
Anti-CARS	AMAb90971	IgG2a	IHC, WB
Anti-CARS	AMAb90972	IgG2b	IHC
Anti-CARS	AMAb90973	IgG1	IHC, WB
Anti-CD45	AMAb90519	IgG2a	IHC, WB
Anti-CD45	AMAb90518	IgG1	IHC, WB
Anti-CDH1	AMAb90862	IgG2b	IHC*, WB*, ICC-IF
Anti-CDH1	AMAb90863	IgG1	IHC*, WB*
Anti-CDH1	AMAb90865	IgG2a	IHC*, WB*, ICC-IF
Anti-CDH2	AMAb91220	IgG1	IHC*, WB*, ICC-IF
Anti-CDK5RAP2	AMAb91163	IgG1	IHC, ICC-IF
Anti-CEP350	AMAb91164	IgG1	IHC, ICC-IF
Anti-CLDN1	AMAb91213	IgG1	IHC*, WB, ICC-IF
Anti-CNDP1	AMAb90698	IgG1	WB
Anti-COX411	AMAb91171	IgG1	IHC, WB* ICC-IF
Anti-COX411	AMAb91173	IgG2a	IHC, WB
Anti-COX411	AMAb91176	IgG1	IHC, WB, ICC-IF
Anti-CS	AMAb91005	IgG1	IHC, WB, ICC-IF
Anti-CS	AMAb91006	IgG1	IHC, WB
Anti-CS	AMAb91007	IgG1	IHC, WB, ICC-IF
Anti-CS	AMAb91008	IgG2b	IHC, WB, ICC-IF
Anti-CS	AMAb91009	IgG1	IHC, WB, ICC-IF
Anti-CTCF	AMAb90663	IgG2a	IHC, WB*, ICC-IF
Anti-CTCF	AMAb90664	IgG1	IHC, WB, ICC-IF
Anti-CTCF	AMAb90666	IgG2b	IHC, WB, ICC-IF

* Enhanced Validation

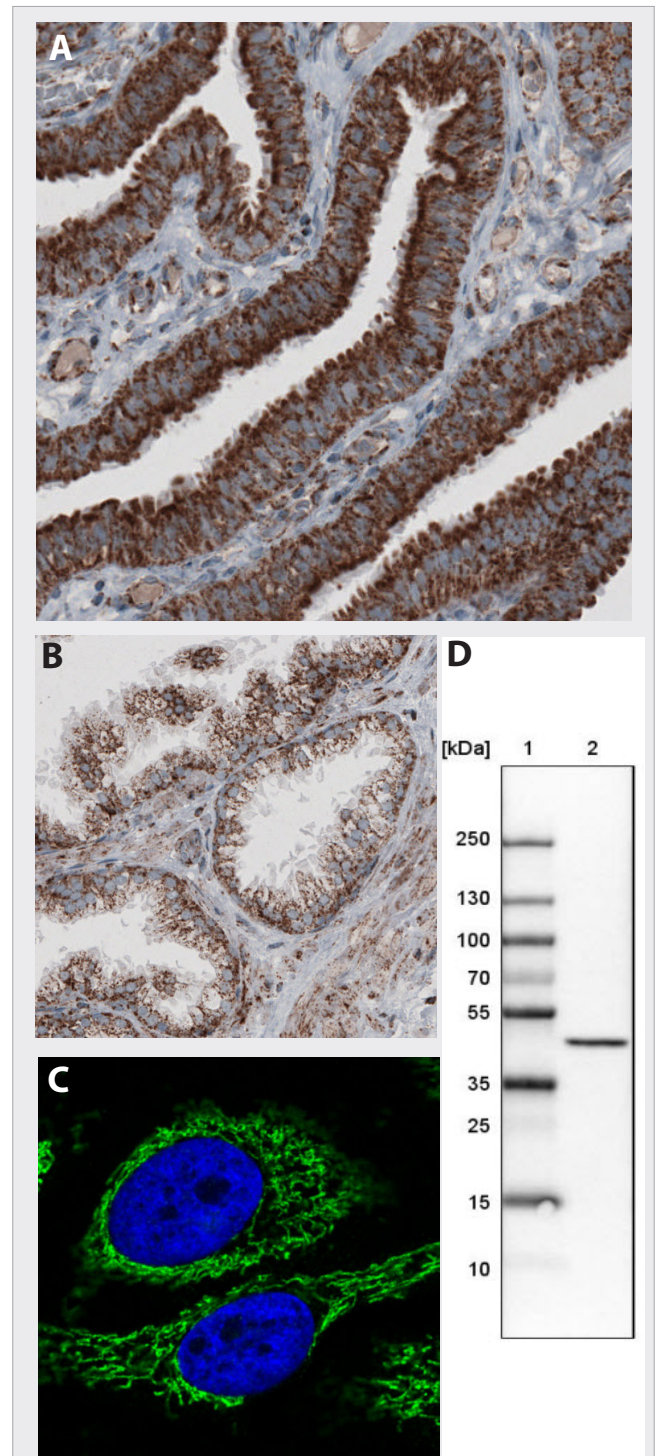
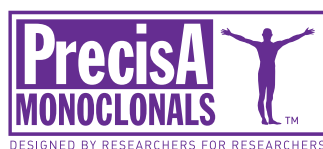


Fig.31 Citrate synthase is a Krebs tricarboxylic acid cycle enzyme that catalyses the synthesis of citrate from oxaloacetate and acetyl coenzyme A. The enzyme is found in nearly all cells capable of oxidative metabolism and is present in mitochondria.

The IHC staining with the Anti-CS monoclonal antibody AMAb91007 shows strong granular cytoplasmic immunoreactivity in normal human tissues, e.g. fallopian tube (A) and prostate (B). ICC-IF shows positivity in mitochondria in HeLa cells (C, in green). Note also a band of expected molecular weight for CS in positive cell line U-251 shown by Western blot (lane 2, D).

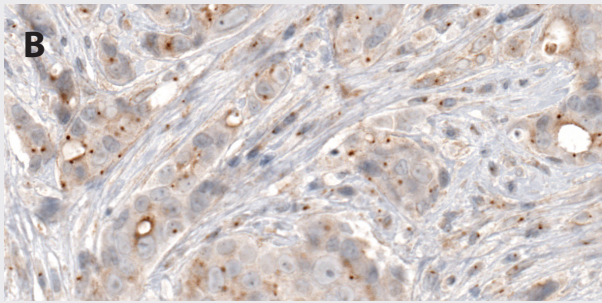
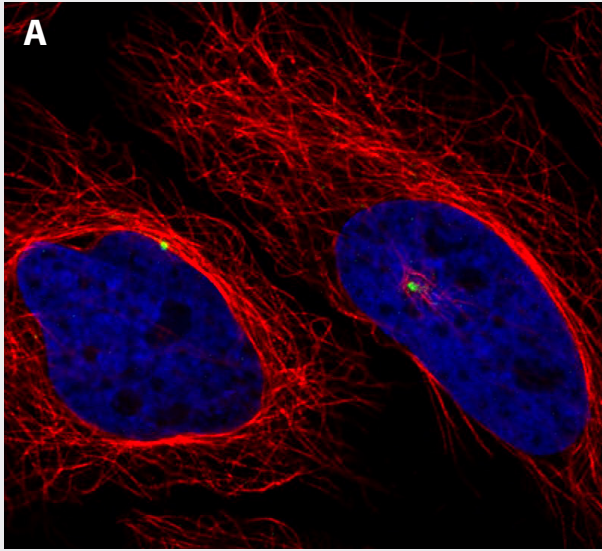


Fig.32 CDK5RAP2 protein regulates centrosome function and chromosome segregation. Immunofluorescence staining with Anti-CDK5RAP2 monoclonal antibody AMAb91163 shows positivity in centrosome in HeLa cell line (A). The IHC staining of human breast cancer shows centrosome-like immunoreactivity in tumor cells (B).

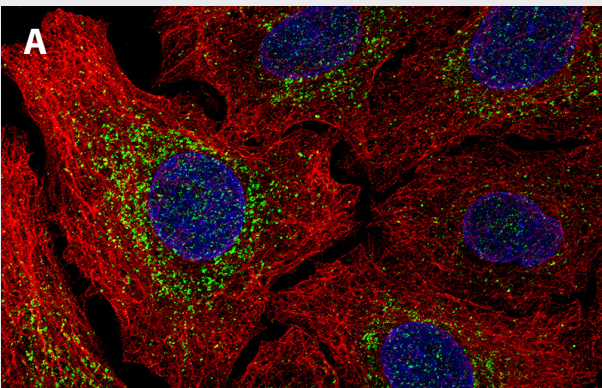
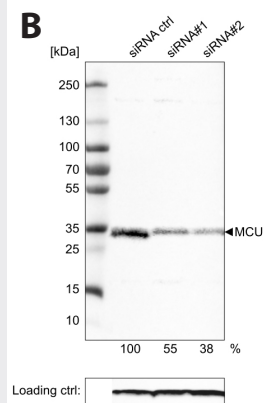


Fig.33 MCU, the mitochondrial calcium uniporter, is an inner membrane transport protein essential for the regulation of calcium uptake and the maintenance of mitochondrial calcium homeostasis.

The ICC-IF staining of A-549 cell line using the Anti-MCU monoclonal antibody AMAb91189 shows specific staining of mitochondria in green (A). The antibody specificity is confirmed by Western Blot in A-549 cells using siRNA pretreatment (B).

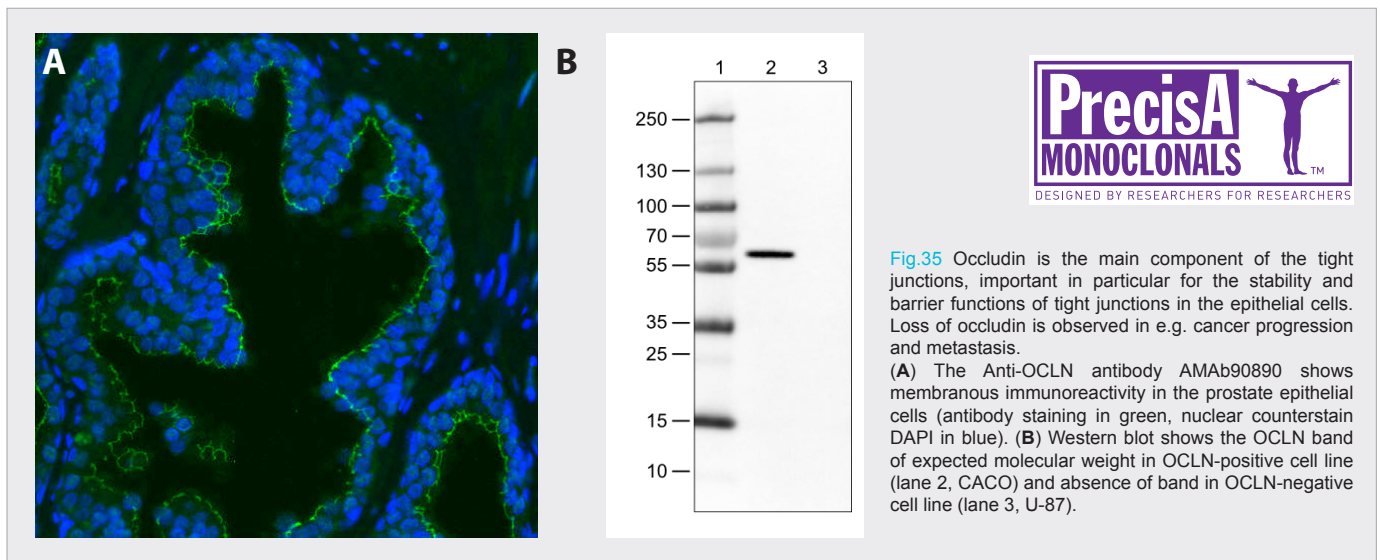
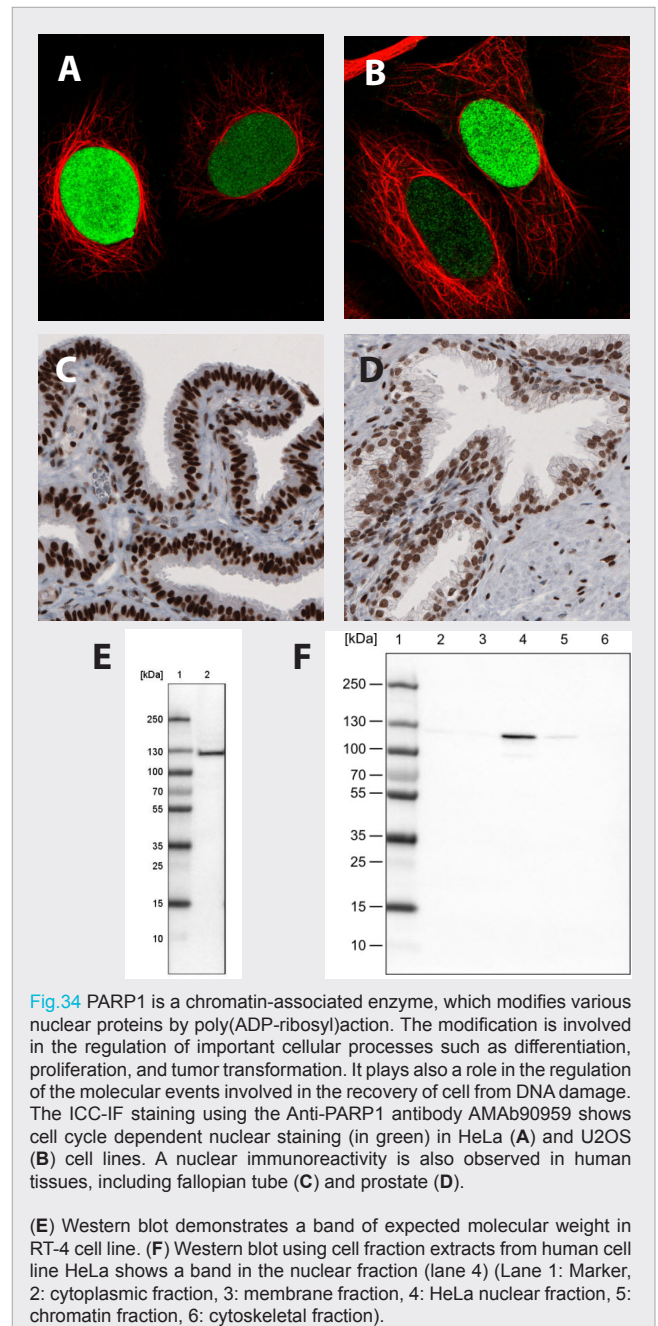


Product Name	Product Number	Isotype	Validated Applications
Anti-CTNNA1	AMAb91209	IgG2a	IHC, WB, ICC-IF
Anti-CTNNA1	AMAb91210	IgG1	IHC, WB, ICC-IF
Anti-DAXX	AMAb91191	IgG1	IHC, ICC-IF
Anti-DES	AMAb91302	IgG1	WB, ICC-IF
Anti-DES	AMAb91303	IgG2a	WB, ICC-IF
Anti-EGFR	AMAb90816	IgG1	IHC, WB
Anti-EGFR	AMAb90819	IgG1	WB
Anti-EMD	AMAb90560	IgG2a	IHC, WB*, ICC-IF
Anti-EMD	AMAb90562	IgG1	IHC, WB*, ICC-IF
Anti-EZR	AMAb90975	IgG1	IHC, WB, ICC-IF
Anti-EZR	AMAb90976	IgG1	IHC*, WB*, ICC-IF
Anti-EZR	AMAb90977	IgG2b	IHC, WB, ICC-IF
Anti-EZR	AMAb90979	IgG2b	IHC, WB, ICC-IF
Anti-F3	AMAb91235	IgG1	IHC, WB*
Anti-F3	AMAb91236	IgG2a	IHC, WB*
Anti-FBN1	AMAb90584	IgG2b	IHC, WB
Anti-FBN1	AMAb90585	IgG1	IHC
Anti-FN1	AMAb91223	IgG1	IHC, WB
Anti-FUS	AMAb90549	IgG1	IHC*, WB*, ICC-IF
Anti-GAPDH	AMAb91153	IgG2a	IHC, WB*, ICC-IF
Anti-GAPDH	AMAb91152	IgG1	IHC, WB*
Anti-GORASP2	AMAb90993	IgG1	IHC, WB
Anti-GORASP2	AMAb91016	IgG2b	IHC*, WB*, ICC-IF
Anti-HMGCR	AMAb90618	IgG2a	IHC, WB*
Anti-HMGCR	AMAb90619	IgG1	IHC*, WB*
Anti-HNRNPC	AMAb91010	IgG2a	IHC, WB*, ICC-IF
Anti-HNRNPC	AMAb91012	IgG1	IHC, WB*, ICC-IF
Anti-HSP90B1	AMAb91019	IgG2b	IHC*, WB*, ICC-IF
Anti-LAMA1	AMAb91091	IgG1	IHC, WB
Anti-LAMA1	AMAb91117	IgG1	IHC*, WB
Anti-LAMA2	AMAb91166	IgG1	IHC*, WB
Anti-LAMA3	AMAb91123	IgG1	IHC, WB
Anti-LAMA4	AMAb91133	IgG2b	IHC, WB
Anti-LAMA4	AMAb91134	IgG1	IHC*, WB
Anti-LAMA5	AMAb91124	IgG1	IHC*, WB*
Anti-LAMB1	AMAb91092	IgG1	IHC, WB
Anti-LAMB2	AMAb91096	IgG1	IHC, WB*
Anti-LAMB2	AMAb91097	IgG2a	IHC*, WB
Anti-LAMB3	AMAb91160	IgG1	IHC*, WB, ICC-IF
Anti-LAMB3	AMAb91161	IgG1	IHC*, WB
Anti-LAMC1	AMAb91136	IgG2b	IHC, WB
Anti-LAMC1	AMAb91137	IgG1	IHC, WB
Anti-LAMC1	AMAb91138	IgG2b	IHC*, WB
Anti-LAMC1	AMAb91140	IgG1	IHC, WB
Anti-LAMC2	AMAb91098	IgG1	IHC*, WB*, ICC-IF
Anti-LAMP1	AMAb91298	IgG3	IHC, WB
Anti-LAMP1	AMAb91299	IgG1	IHC, WB
Anti-LAMP1	AMAb91300	IgG2b	IHC, WB
Anti-LAMP1	AMAb91301	IgG2a	IHC, WB
Anti-LAMP1	AMAb91168	IgG1	IHC, WB
Anti-LAMP1	AMAb91170	IgG2a	IHC, WB
Anti-LMN1	AMAb91251	IgG1	IHC, WB, ICC-IF
Anti-MCU	AMAb91189	IgG1	WB*, ICC-IF
Anti-MTDH	AMAb90763	IgG1	IHC, WB, ICC-IF
Anti-MTDH	AMAb90762	IgG2a	IHC, WB, ICC-IF
Anti-NIFK	AMAb90961	IgG2a	IHC, ICC-IF
Anti-NIFK	AMAb90962	IgG1	IHC, WB, ICC-IF

* Enhanced Validation

Product Name	Product Number	Isotype	Validated Applications
Anti-NOP56	AMAb91013	IgG1	IHC, WB*, ICC-IF
Anti-OCLN	AMAb90889	IgG2a	IHC*, WB, ICC-IF
Anti-OCLN	AMAb90890	IgG2a	IHC, WB, ICC-IF
Anti-OCLN	AMAb90893	IgG1	IHC, WB, ICC-IF
Anti-PARP1	AMAb90959	IgG1	IHC, WB*, ICC-IF
Anti-PARP1	AMAb90960	IgG1	IHC, WB*
Anti-PCM1	AMAb90565	IgG1	IHC*, WB
Anti-PDIA3	AMAb90988	IgG1	IHC*, WB*, ICC-IF
Anti-PDIA3	AMAb90990	IgG1	IHC, WB
Anti-PDIA3	AMAb90991	IgG2b	IHC, WB
Anti-PFN1	AMAb91181	IgG2a	IHC, WB*
Anti-PGM1	AMAb91155	IgG1	IHC, WB
Anti-PGM1	AMAb91156	IgG1	IHC, WB
Anti-PPIB	AMAb91245	IgG2a	IHC*, WB*
Anti-PPIB	AMAb91249	IgG2b	WB
Anti-SLC22A2	AMAb90791	IgG1	IHC*
Anti-SLC22A2	AMAb90792	IgG2b	IHC*
Anti-SLC27A5	AMAb90572	IgG1	IHC, WB
Anti-SLC27A5	AMAb90574	IgG1	IHC, WB
Anti-SLC27A5	AMAb90575	IgG1	IHC, WB
Anti-SLCO1B3	AMAb91230	IgG1	IHC
Anti-SLCO1B3	AMAb91231	IgG1	IHC
Anti-SMCHD1	AMAb91280	IgG1	IHC, ICC-IF
Anti-SMCHD1	AMAb91282	IgG2b	IHC, ICC-IF
Anti-SNAI1	AMAb91215	IgG1	IHC*, ICC-IF
Anti-ST13	AMAb91218	IgG1	IHC, WB
Anti-THSD7A	AMAb91233	IgG1	IHC*
Anti-THSD7A	AMAb91234	IgG1	IHC*
Anti-TP63	AMAb91224	IgG1	IHC, WB*
Anti-TUFM	AMAb90964	IgG1	IHC, WB*, ICC-IF
Anti-TUFM	AMAb90965	IgG2a	IHC, WB, ICC-IF
Anti-TUFM	AMAb90966	IgG1	IHC, WB, ICC-IF
Anti-USP30	AMAb91295	IgG2a	IHC
Anti-VIM	AMAb90516	IgG1	IHC, WB*
Anti-VPS26A	AMAb90967	IgG1	IHC*, WB*, ICC-IF
Anti-ZYX	AMAb90992	IgG2b	IHC, ICC-IF

* Enhanced Validation



PrecisA Monoclonals in Immunity & Inflammation

Product Name	Product Number	Isotype	Validated Applications
Anti-ADAR	AMAb90535	IgG1	IHC, WB*, ICC-IF
Anti-ANXA1	AMAb90558	IgG1	IHC, WB*, ICC-IF
Anti-CD14	AMAb90897	IgG1	IHC*, WB
Anti-CD14	AMAb90898	IgG1	IHC*
Anti-CD3E	AMAb90876	IgG1	IHC*, WB
Anti-CD3E	AMAb90879	IgG1	IHC*, WB
Anti-CD4	AMAb90754	IgG1	IHC*, WB
Anti-CD40	AMAb90905	IgG1	IHC*, WB
Anti-CD45	AMAb90519	IgG2a	IHC, WB
Anti-CD45	AMAb90518	IgG1	IHC, WB
Anti-CD68	AMAb90873	IgG1	IHC
Anti-CD68	AMAb90874	IgG1	IHC, WB*
Anti-CD8A	AMAb90883	IgG1	IHC
Anti-CHGA	AMAb90525	IgG1	IHC, WB, ICC-IF
Anti-CLDN1	AMAb91213	IgG1	IHC*, WB, ICC-IF
Anti-DAXX	AMAb91191	IgG1	IHC, ICC-IF
Anti-FCGRT	AMAb91199	IgG2a	IHC
Anti-FCGRT	AMAb91200	IgG1	IHC, WB
Anti-ITGAM	AMAb90911	IgG1	IHC*, WB
Anti-ITGAX	AMAb90915	IgG1	IHC*, WB
Anti-ITIH4	AMAb90921	IgG1	IHC, WB
Anti-LAMP1	AMAb91298	IgG3	IHC, WB
Anti-LAMP1	AMAb91299	IgG1	IHC, WB
Anti-LAMP1	AMAb91300	IgG2b	IHC, WB
Anti-LAMP1	AMAb91301	IgG2a	IHC, WB
Anti-LAMP1	AMAb91168	IgG1	IHC, WB
Anti-LAMP1	AMAb91170	IgG2a	IHC, WB
Anti-MOG	AMAb91066	IgG1	IHC, WB
Anti-MOG	AMAb91067	IgG1	IHC, WB
Anti-MRC1	AMAb90746	IgG2b	IHC, WB
Anti-MST1R	AMAb90766	IgG1	WB
Anti-MUC16	AMAb91056	IgG1	IHC, ICC-IF
Anti-MUC16	AMAb91057	IgG2b	IHC
Anti-NLRP3	AMAb90569	IgG1	WB, ICC-IF
Anti-OTC	AMAb91264	IgG2a	IHC*, WB, ICC-IF
Anti-OTC	AMAb91265	IgG1	IHC, WB, ICC-IF
Anti-OTC	AMAb91266	IgG1	WB
Anti-PDCD1	AMAb91197	IgG1	IHC, WB
Anti-PPIB	AMAb91245	IgG2a	IHC*, WB*
Anti-PPIB	AMAb91249	IgG2b	WB*
Anti-RBCK1	AMAb91288	IgG1	IHC, WB
Anti-RNASE7	AMAb90583	IgG2a	IHC, WB
Anti-RNASE7	AMAb90582	IgG1	IHC, WB
Anti-STAT3	AMAb90776	IgG1	IHC, WB*
Anti-STAT3	AMAb90777	IgG1	IHC*, WB*, ICC-IF
Anti-VSIR	AMAb91252	IgG1	IHC, WB
Anti-VSIR	AMAb91253	IgG1	IHC
Anti-ZYX	AMAb90992	IgG2b	IHC, ICC-IF

* Enhanced Validation

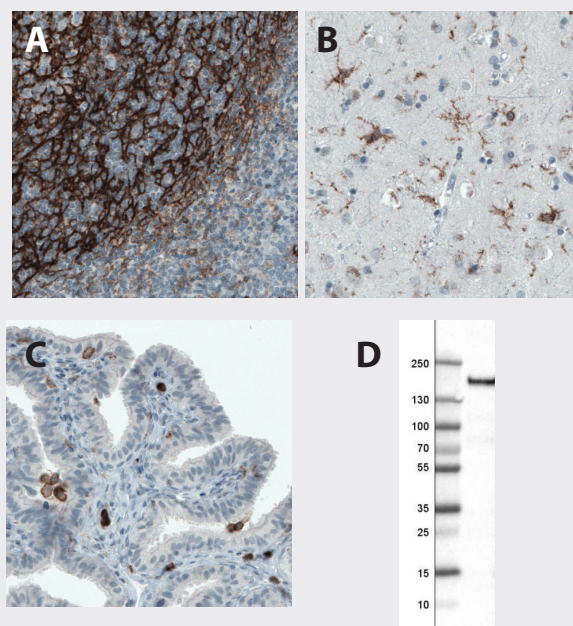


Fig.36 CD11B encodes the integrin alpha M chain in a macrophage receptor 1 ('Mac-1'), or inactivated-C3b (iC3b) receptor 3 ('CR3'). It is expressed on the surface of many leukocytes, including macrophages, granulocytes and natural killer cells. It is often used as a marker to identify macrophages and microglia. The IHC staining using the Anti-CD11B antibody AMAb90911 shows strong immunoreactivity in the reaction centre in tonsil (A), as well as positivity in microglia in cortex (B) and leukocytes in the fallopian tube (C). Western blot demonstrate a band of expected molecular weight in human tonsil lysate (D).

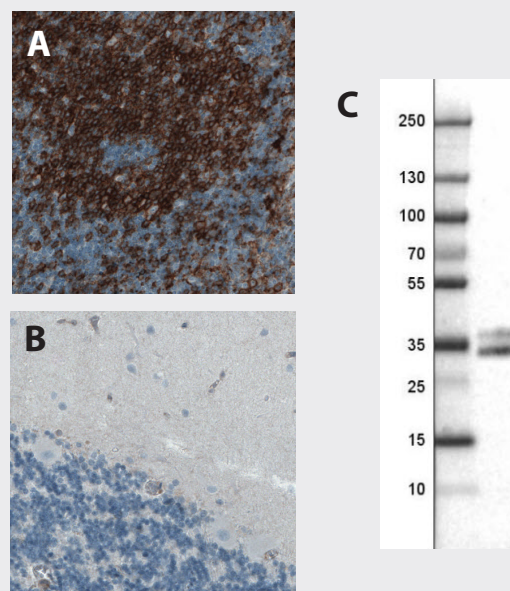


Fig.37 CD40 protein is a receptor on antigen-presenting cells of the immune system and is essential for mediating a broad variety of immune and inflammatory responses including T cell-dependent immunoglobulin class switching, memory B cell development, and germinal center formation. The IHC staining using the Anti-CD40 monoclonal antibody AMAb90905 shows strong immunoreactivity in human tonsil (A) and absence of signal in the cerebellum (B) used as negative control. Western blot demonstrates a band of CD40 at expected molecular weight in human spleen lysate (C).

VERY RELIABLE ANTIBODIES

Atlas Antibodies manufactures and provides over 21,000 highly validated monoclonal and polyclonal primary antibodies and control antigens targeting the majority of human proteins for tissue and cell analysis to explore and accelerate research in biology, pathology, and medicine. The portfolio covers different research areas such as neuroscience, cancer, cell biology, stem cell & development. All our products are rigorously evaluated for specificity, reproducibility and performance and characterized for use in IHC, WB, and ICC-IF. Enhanced validation is applied as an extra level of security of antibody specificity in a defined context. Available as 25 µL and 100 µL unit size.

CREATED BY THE HUMAN PROTEIN ATLAS

With our roots in the Human Protein Atlas project, an integration of antibody-based imaging, proteomics, and transcriptomics, our antibodies are affinity-purified, reproducible, selective, and specific for their target proteins through our enhanced validation process. Our Triple A Polyclonals™ are developed within the Human Protein Atlas project.

VALIDATED BY ENHANCED VALIDATION

We take great care to validate our antibodies in IHC, WB, and ICC-IF. Our antibodies are validated in all major human tissues and organs and 20 cancer tissues. Each antibody is supported by over 500 staining images. As an additional layer of security, we perform Enhanced Validation. By using 5 different enhanced validation methods we validate our antibodies for each combination of protein, sample, and application. Discover our Triple A Polyclonals™ and PrecisA Monoclonals™ antibodies targeting the majority of human proteins in cells, tissues, and organs.

Figures:

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- Fig.2: Anti-DICER1 (AMAb90737)
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Atlas Antibodies Advanced Polyclonals.

Triple A Polyclonals™ are rabbit polyclonal primary antibodies developed within the Human Protein Atlas project. IHC characterization data from 44 normal and 20 cancer tissues is available on the Human Protein Atlas portal.



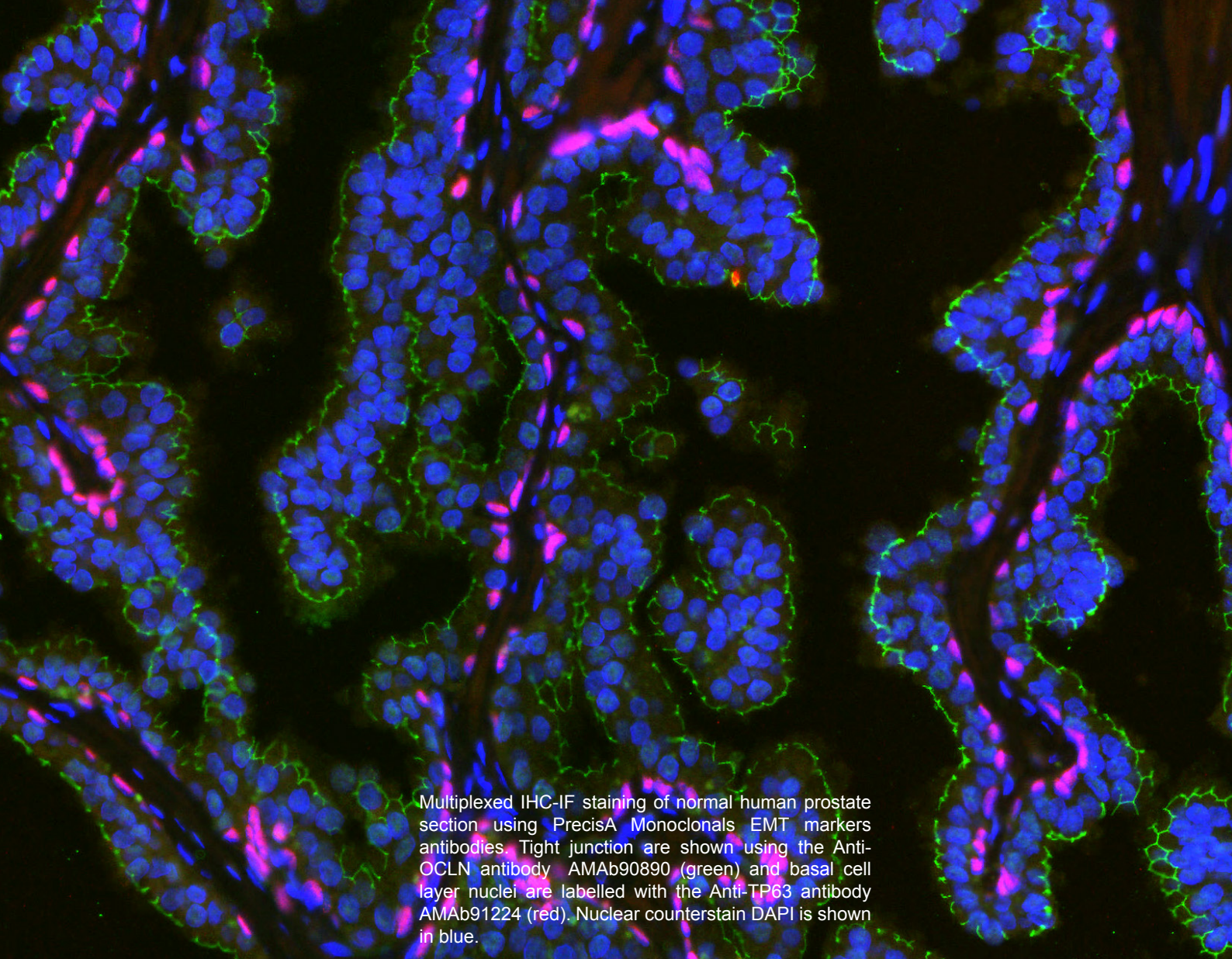
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Multiplexed IHC-IF staining of normal human prostate section using PrecisA Monoclonals EMT markers antibodies. Tight junction are shown using the Anti-OCN antibody AMAb90890 (green) and basal cell layer nuclei are labelled with the Anti-TP63 antibody AMAb91224 (red). Nuclear counterstain DAPI is shown in blue.



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