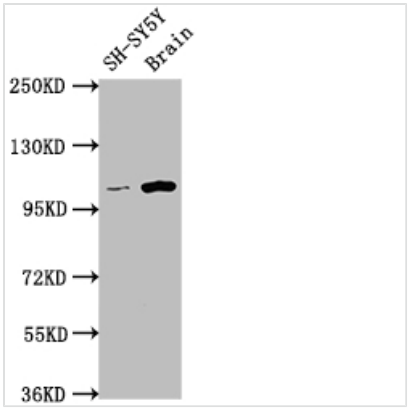
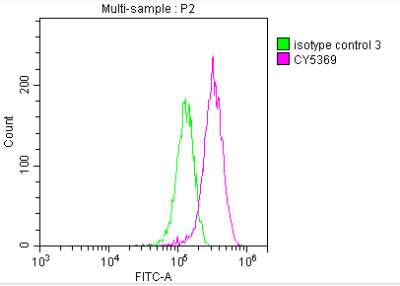
LGR5 Antibody

Product Code	CSB-RA262034A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	O75473
Immunogen	A synthesized peptide derived from human LGR5/GPR49
Species Reactivity	Human, Rat
Tested Applications	ELISA, WB, FC; Recommended dilution: WB:1:500-1:5000, FC:1:20-1:200
Relevance	Receptor for R-spondins that potentiates the canonical Wnt signaling pathway and acts as a stem cell marker of the intestinal epithelium and the hair follicle. Upon binding to R-spondins (RSPO1, RSPO2, RSPO3 or RSPO4), associates with phosphorylated LRP6 and frizzled receptors that are activated by extracellular Wnt receptors, triggering the canonical Wnt signaling pathway to increase expression of target genes. In contrast to classical G-protein coupled receptors, does not activate heterotrimeric G-proteins to transduce the signal. Involved in the development and/or maintenance of the adult intestinal stem cells during postembryonic development.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Cancer; Signal transduction; Stem cells
Gene Names	LGR5
Accession NO.	4H8

Image



Western Blot
Positive WB detected in: SH-SY5Y whole cell lysate, Rat brain tissue
All lanes: LGR5 antibody at 1:1500
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 100, 98, 93 kDa
Observed band size: 100 kDa



Overlay histogram showing HepG2 cells stained with CSB-RA262034A0HU (red line) at 1:50. The cells were incubated in 10% normal goat serum to block non-specific protein-protein interactions followedby the antibody (1µg/1*106cells) for 1 h at 4°C.The secondary antibody used was FITC-conjugated goat anti-rabbit IgG (H+L) at 1/200 dilution for 30min at 4°C. Control antibody (green line) was Rabbit IgG (1µg/1*106cells) used under the same conditions. Acquisition of >10,000 events was performed.

Description

The first step in the preparation of recombinant LGR5 antibody is to obtain the LGR5 antibody gene. The heavy and light chain genes of the antibody were constructed into a plasma vector and then transfected into suspended mammalian cells transiently. After expression verification, cell supernatant was collected in expanded culture and purified recombinant LGR5 antibody was obtained using affinity-chromatography. This recombinant LGR5 antibody has been validated for the detection of LGR5 protein from Human, Rat in the ELISA, WB, FC.

LGR5, also known as GPR49, is a stem cell marker found in the crypts of the intestine and the mammary glands. The protein LGR5 is required for proper embryonic development. In the presence of the ligand R-spondin, LGR5 controls Wnt signaling (RSPO). LGR5 stimulates cancer stem cell proliferation and self-renewal by potentiating the Wnt/β-catenin signaling pathway. LGR5 has been shown to increase cancer cell mobility, tumor formation, and epithelial-mesenchymal transition in breast cancer cells by activating Wnt/β-catenin signaling. It has also been reported that high LGR5 expression is positively related to shorter patient survival.