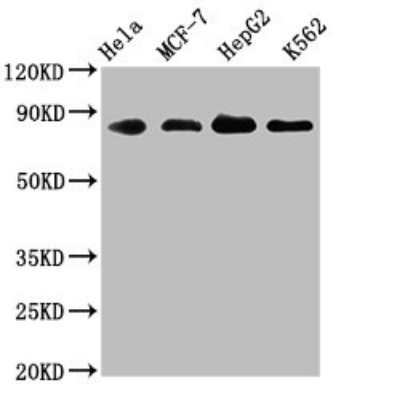
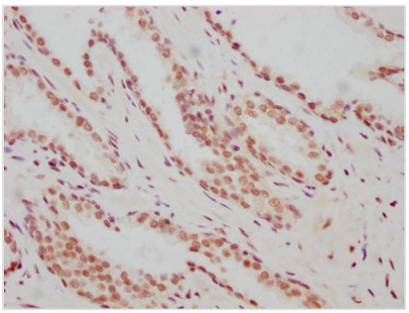
ARNT Antibody

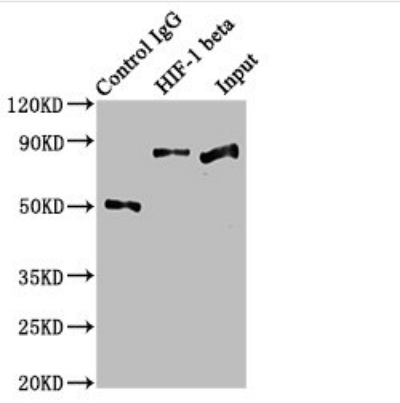
Product Code	CSB-RA002121A0HU
Abbreviation	Aryl hydrocarbon receptor nuclear translocator
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P27540
Immunogen	A synthesized peptide derived from human ARNT
Species Reactivity	Human
Tested Applications	ELISA, WB, IHC, IP; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200, IP:1:200-1:1000
Relevance	Required for activity of the Ah (dioxin) receptor. This protein is required for the ligand-binding subunit to translocate from the cytosol to the nucleus after ligand binding. The complex then initiates transcription of genes involved in the activation of PAH procarcinogens. The heterodimer binds to core DNA sequence 5'-TACGTG-3' within the hypoxia response element (HRE) of target gene promoters and functions as a transcriptional regulator of the adaptive response to hypoxia (By similarity). The heterodimer ARNT:AHR binds to core DNA sequence 5'-TGCGTG-3' within the dioxin response element (DRE) of target gene promoters and activates their transcription (PubMed:28396409).
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
Alias	Aryl hydrocarbon receptor nuclear translocator, ARNT protein, Class E basic helix-loop-helix protein 2, bHLHe2, Dioxin receptor, nuclear translocator, Hypoxia-inducible factor 1-beta, HIF-1-beta, HIF1-beta, ARNT, BHLHE2
Immunogen Species	Homo sapiens (Human)
Research Area	Cardiovascular
Gene Names	ARNT
Accession NO.	2F11
Image	



Western Blot
Positive WB detected in: Hela whole cell lysate, MCF-7 whole cell lysate, HepG2 whole cell lysate, K562 whole cell lysate
All lanes: ARNT antibody at 1.83µg/ml
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 87, 85, 86 KDa
Observed band size: 87 KDa



IHC image of CSB-RA002121A0HU diluted at 1:183 and staining in paraffin-embedded human prostate cancer performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4°C overnight. The primary is detected by a biotinylated secondary antibody and visualized using an HRP conjugated SP system.



Immunoprecipitating HIF-1 beta in Hela whole cell lysate
Lane 1: Rabbit control IgG instead of CSB-RA002121A0HU in Hela whole cell lysate. For western blotting, a HRP-conjugated Protein G antibody was used as the secondary antibody (1/2000)
Lane 2: CSB-RA002121A0HU (3µg) + Hela whole cell lysate (500µg)
Lane 3: Hela whole cell lysate (20µg)

Description

Recombinant ARNT antibody production begins with the obtaining of the antibody genes. This process includes animal immunization, spleen isolation, RNA extraction, DNA synthesis via reverse transcription, and DNA sequencing and screening. Next, the antibody genes were cloned into a plasma vector and then transfected into an appropriate mammalian cell line for expression. The recombinant ARNT antibody was obtained and characterized following transient expression. It was purified using affinity-chromatography. And it can be used to detect the ARNT antibody from Human in the ELISA, WB, IHC, IP.

ARNT, also designated as HIF-1β, is a nuclear protein that acts as a dimerization partner for several transcription factors including AHR, HIF, single-minded proteins (SIM), or the estrogen receptor (ER). It plays an important role in the adaptive responses to microenvironmental stresses such as dioxin exposure and hypoxia. It promotes cell survival and angiogenesis with the

formation of a heterodimer with HIF-1α at varying oxygen levels.