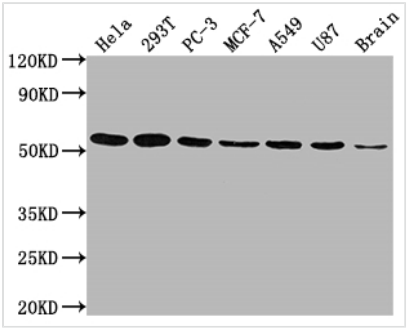
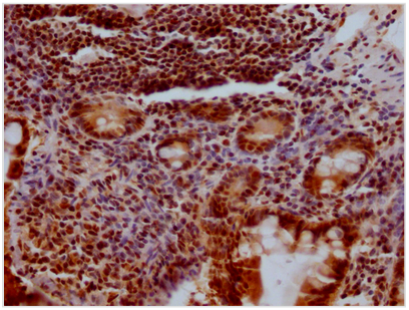
KLF4 Recombinant Monoclonal Antibody

Product Code	CSB-RA194949A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	O43474
Immunogen	A synthesized peptide derived from human KLF4
Species Reactivity	Human
Tested Applications	ELISA, WB, IHC, IF, IP; Recommended dilution: WB:1:500-1:5000, IHC:1:50-1:200, IF:1:20-1:200, IP:1:200-1:1000
Relevance	Transcription factor; can act both as activator and as repressor. Binds the 5'-CACCC-3' core sequence. Binds to the promoter region of its own gene and can activate its own transcription. Regulates the expression of key transcription factors during embryonic development. Plays an important role in maintaining embryonic stem cells, and in preventing their differentiation. Required for establishing the barrier function of the skin and for postnatal maturation and maintenance of the ocular surface. Involved in the differentiation of epithelial cells and may also function in skeletal and kidney development. Contributes to the down-regulation of p53/TP53 transcription.
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	Epigenetics and Nuclear Signaling; Cancer; Cardiovascular; Developmental biology; Stem cells
Gene Names	KLF4
Clone No.	3A1

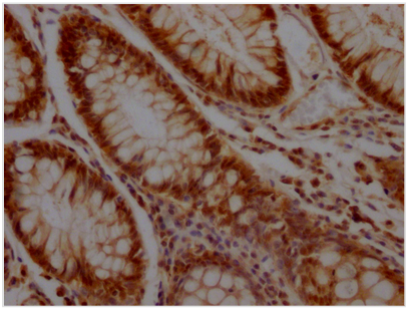
Image



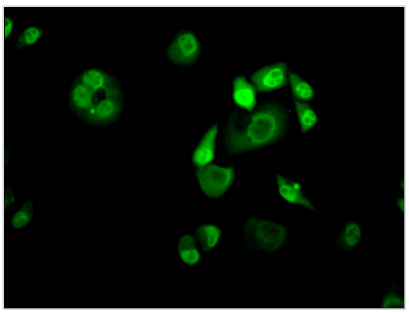
Western Blot
Positive WB detected in: Hela whole cell lysate, 293T whole cell lysate, PC-3 whole cell lysate, MCF-7 whole cell lysate, A549 whole cell lysate, U87 whole cell lysate, Brain tissue
All lanes: KLF4 antibody at 1:1500
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 55, 52, 46, 13, 7 kDa
Observed band size: 55 kDa



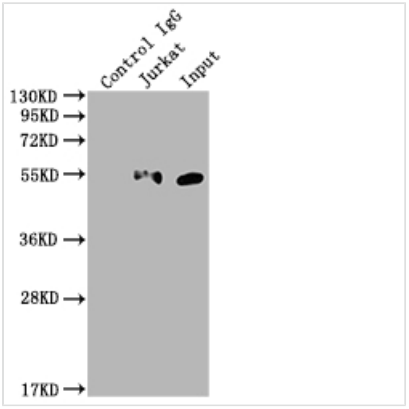
IHC image of CSB-RA194949A0HU diluted at 1:100 and staining in paraffin-embedded human small intestine tissue performed on a Leica BondTM system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.



IHC image of CSB-RA194949A0HU diluted at 1:100 and staining in paraffin-embedded human colon 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? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.



Immunofluorescence staining of Hela Cells with CSB-RA194949A0HU at 1:50, counter-stained with DAPI. The cells were fixed in 4% formaldehyde, permeated by 0.2% TritonX-100, and blocked in 10% normal Goat Serum. The cells were then incubated with the antibody overnight at 4?. Nuclear DNA was labeled in blue with DAPI. The secondary antibody was FITC-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L).



Immunoprecipitating KLF4 in Hela whole cell lysate
Lane 1: Rabbit control IgG instead of CSB-RA194949A0HU 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-RA194949A0HU(2μg)+ Hela whole cell lysate(500μg)
Lane 3: Hela whole cell lysate (10μg)

Description

The KLF4 recombinant monoclonal antibody is produced using recombinant DNA technology and is suitable for detecting human KLF4 protein in ELISA, WB, IHC, IF, and IP applications. To produce the antibody, the gene coding for the KLF4 monoclonal antibody is synthesized by sequencing the cDNA of the KLF4 antibody-producing hybridomas. The hybridomas are generated by fusing

myeloma cells with B cells isolated from an animal that was immunized with a synthesized peptide derived from human KLF4. The synthesized gene is then cloned into a vector and transfected into cells for cultivation. After culturing, the resulting KLF4 recombinant monoclonal antibody is purified from the cell culture supernatant using affinity chromatography.

The KLF4 protein is a transcription factor that can bind to DNA and regulate the expression of target genes. It plays important roles in various cellular processes, including cell proliferation, differentiation, and apoptosis. KLF4 has also been shown to function as a tumor suppressor in some contexts by inducing cell cycle arrest and promoting apoptosis. It has also been implicated in promoting cell differentiation in a variety of cell types, including skin cells, gut epithelial cells, and immune cells.