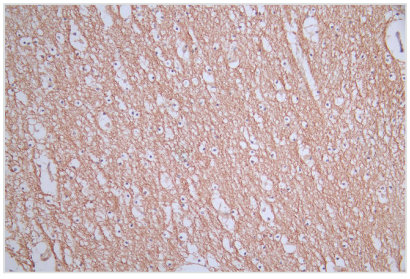
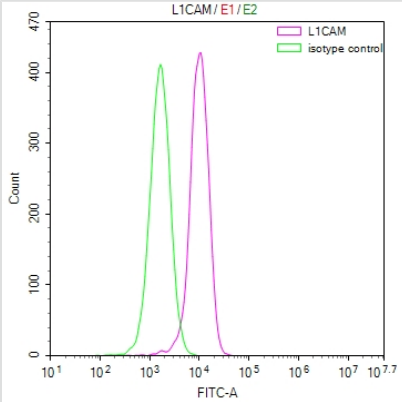
L1CAM Recombinant Monoclonal Antibody

Product Code	CSB-RA588962A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	P32004
Immunogen	A synthesized peptide derived from Human L1CAM
Species Reactivity	Human
Tested Applications	ELISA, IHC, FC; Recommended dilution: IHC:1:50-1:200, FC:1:50-1:200
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	Neuroscience;Signal transduction
Gene Names	L1CAM
Clone No.	14H7

Image



IHC image of CSB-RA588962A0HU diluted at 1:50 and staining in paraffin-embedded human brain 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°C overnight. The primary is detected by a Goat anti-rabbit polymer IgG labeled by HRP and visualized using 0.76% DAB.



Overlay Peak curve showing MCF-7 cells stained with CSB-RA588962A0HU (red line) at 1:50. The cells were fixed in 4% formaldehyde and permeated by 0.2% TritonX-100. Then 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (1μg/1*10^{6}cells) for 45min at 4?. The secondary antibody used was FITC-conjugated Goat Anti-rabbit IgG(H+L) at 1:200 dilution for 35min at 4?.Control antibody (green line) was rabbit IgG (1μg/1*10^{6}cells) used under the same conditions. Acquisition of >10,000 events was performed.

Description

To generate a recombinant monoclonal antibody against L1CAM, CUSABIO initiated the process by immunizing a rabbit with a synthesized peptide derived from human L1CAM. B cells were subsequently isolated from the immunized rabbit, and RNA was extracted from these cells. The extracted RNA was reverse-transcribed into cDNA, which was then used as a template to extend L1CAM antibody genes using degenerate primers. These synthesized L1CAM antibody genes were incorporated into a plasmid vector and transfected into host cells for expression. The resulting L1CAM recombinant monoclonal antibody was isolated from the cell culture supernatant via affinity chromatography and assessed for its suitability in ELISA, IHC, and FC assays, demonstrating specificity for human L1CAM protein.

The L1CAM protein is primarily associated with neural development and plays a crucial role in axon guidance, cell adhesion, and synapse formation in the nervous system. It also has implications for neural regeneration, tumor invasion, and potentially other cellular processes outside the nervous system.