



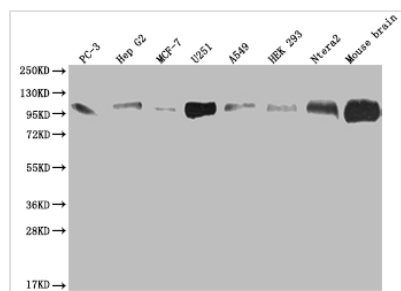
# ALCAM Recombinant Monoclonal Antibody

<b>Product Code</b>	CSB-RA437652A0HU
<b>Storage</b>	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
<b>Uniprot No.</b>	Q13740
<b>Immunogen</b>	A synthesized peptide derived from human ALCAM
<b>Species Reactivity</b>	Human, Mouse
<b>Tested Applications</b>	ELISA, WB, IHC; Recommended dilution: WB:1:500-1:2000, IHC:1:50-1:200
<b>Relevance</b>	<p>Cell adhesion molecule that mediates both heterotypic cell-cell contacts via its interaction with CD6, as well as homotypic cell-cell contacts (PubMed:7760007, PubMed:15496415, PubMed:15048703, PubMed:16352806, PubMed:23169771, PubMed:24945728). Promotes T-cell activation and proliferation via its interactions with CD6 (PubMed:15048703, PubMed:16352806, PubMed:24945728). Contributes to the formation and maturation of the immunological synapse via its interactions with CD6 (PubMed:15294938, PubMed:16352806). Mediates homotypic interactions with cells that express ALCAM (PubMed:15496415, PubMed:16352806). Required for normal hematopoietic stem cell engraftment in the bone marrow (PubMed:24740813). Mediates attachment of dendritic cells onto endothelial cells via homotypic interaction (PubMed:23169771). Inhibits endothelial cell migration and promotes endothelial tube formation via homotypic interactions (PubMed:15496415, PubMed:23169771). Required for normal organization of the lymph vessel network. Required for normal hematopoietic stem cell engraftment in the bone marrow. Plays a role in hematopoiesis; required for normal numbers of hematopoietic stem cells in bone marrow. Promotes in vitro osteoblast proliferation and differentiation (By similarity). Promotes neurite extension, axon growth and axon guidance; axons grow preferentially on surfaces that contain ALCAM. Mediates outgrowth and pathfinding for retinal ganglion cell axons (By similarity). {ECO:0000250 UniProtKB:P42292, ECO:0000269 PubMed:15048703, ECO:0000269 PubMed:15294938, ECO:0000269 PubMed:15496415, ECO:0000269 PubMed:16352806, ECO:0000269 PubMed:24945728, ECO:0000269 PubMed:7760007}.; [Isoform 3]: Inhibits activities of membrane-bound isoforms by competing for the same interaction partners. Inhibits cell attachment via homotypic interactions. Promotes endothelial cell migration. Inhibits endothelial cell tube formation. {ECO:0000269 PubMed:15496415}.</p>
<b>Form</b>	Liquid
<b>Conjugate</b>	Non-conjugated
<b>Storage Buffer</b>	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
<b>Purification Method</b>	Affinity-chromatography
<b>Isotype</b>	Rabbit IgG



<b>Clonality</b>	Monoclonal
<b>Product Type</b>	Recombinant Antibody
<b>Immunogen Species</b>	Homo sapiens (Human)
<b>Research Area</b>	Tags & Cell Markers; Immunology
<b>Gene Names</b>	ALCAM
<b>Clone No.</b>	21B9

## Image



### Western Blot

Positive WB detected in: PC3 whole cell lysate, HepG2 whole cell lysate, MCF-7 whole cell lysate, U251 whole cell lysate, A549 whole cell lysate, HEK293 whole cell lysate, Ntera-2 whole cell lysate, Mouse brain tissue

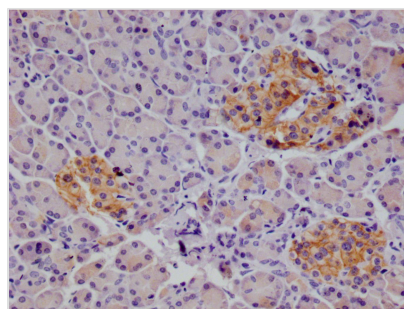
All lanes: ALCAM antibody at 1:2000

### Secondary

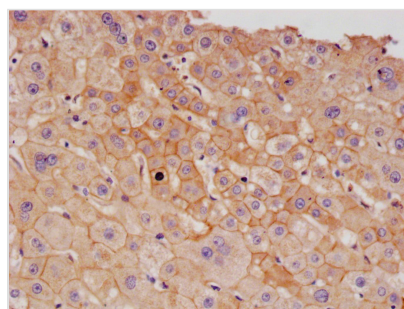
Goat polyclonal to rabbit IgG at 1/50000 dilution

Predicted band size: 66, 64, 16, 34 kDa

Observed band size: 100 kDa



IHC image of CSB-RA437652A0HU diluted at 1:100 and staining in paraffin-embedded human pancreatic tissue performed on a Leica Bond<sup>TM</sup> 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 0.05% DAB.



IHC image of CSB-RA437652A0HU diluted at 1:100 and staining in paraffin-embedded human liver cancer performed on a Leica Bond<sup>TM</sup> 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 0.05% DAB.

## Description

The process of generating the ALCAM recombinant monoclonal antibody is complex and requires several stages. Firstly, the ALCAM monoclonal antibody is obtained and its gene sequence is determined. Next, a vector containing the ALCAM monoclonal antibody gene is created and introduced into a host cell line for culture. During the production of the ALCAM monoclonal antibody, a synthesized peptide based on human ALCAM is utilized as the immunogen. Affinity chromatography is then employed to purify the resulting ALCAM recombinant monoclonal antibody, which is further evaluated for specificity using



ELISA, WB, and IHC applications. This ALCAM recombinant monoclonal antibody is reactive with human and mouse ALCAM proteins.

ALCAM, also known as CD166, is a type I transmembrane protein that belongs to the immunoglobulin superfamily. ALCAM is expressed in various cell types such as lymphocytes, monocytes, endothelial cells, and certain epithelial cells. Its main function is to mediate cell-to-cell adhesion by binding to different receptors such as CD6, CD166, and integrin  $\alpha v \beta 3$ . ALCAM is involved in various biological processes including cell migration, lymphocyte activation, and differentiation, and is also implicated in various diseases such as cancer and autoimmune disorders.