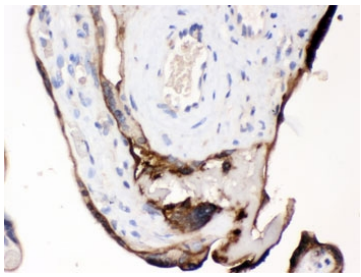
CDCP1 Antibody / SIMA135 (R32422)

Catalog No.	Formulation	Size
R32422	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

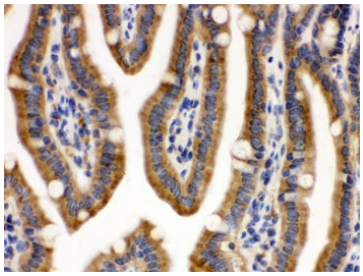
Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity
Buffer	Lyophilized from 1X PBS with 2.5% BSA and 0.025% sodium azide
UniProt	Q9H5V8
Localization	Cytoplasmic, membranous
Applications	Western Blot : 0.1-0.5ug/ml IHC (FFPE) : 0.5-1ug/ml Flow Cytometry : 1-3ug/million cells
Limitations	This CDCP1 antibody is available for research use only.

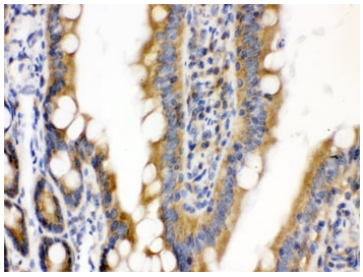
Western blot testing of human SW620 cell lysate with CDCP1 antibody. Expected molecular weight: 93 kDa (unmodified), 130-140 kDa (glycosylated), ~70 kDa (cleaved).



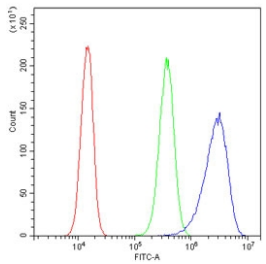
CDCP1 Antibody / SIMA135 immunohistochemistry analysis of human placenta tissue. Formalin-fixed paraffin-embedded human placenta stained with CDCP1 Antibody / SIMA135. HRP-DAB brown chromogenic staining highlights membranous and cytoplasmic signal in placental trophoblast cells, consistent with the expected cell surface localization of CDCP1 / CD318. HIER: boil the paraffin sections in pH 6, 10mM citrate buffer for 20 minutes and allow to cool prior to testing.



CDCP1 Antibody / SIMA135 immunohistochemistry analysis of mouse intestine tissue. Formalin-fixed paraffin-embedded mouse intestine stained with CDCP1 Antibody / SIMA135. HRP-DAB brown chromogenic staining highlights membranous signal along intestinal epithelial cells lining the villi, consistent with the expected cell surface localization of CDCP1 / CD318. HIER: boil the paraffin sections in pH 6, 10mM citrate buffer for 20 minutes and allow to cool prior to testing.



CDCP1 Antibody / SIMA135 immunohistochemistry analysis of rat intestine tissue. Formalin-fixed paraffin-embedded rat intestine stained with CDCP1 Antibody / SIMA135. HRP-DAB brown chromogenic staining highlights membranous signal in intestinal epithelial cells lining the villi, consistent with the expected cell surface localization of CDCP1 / CD318. HIER: boil the paraffin sections in pH 6, 10mM citrate buffer for 20 minutes and allow to cool prior to testing.



Flow cytometry testing of human PC-3 cells with CDCP1 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= CDCP1 antibody.

Description

CUB domain containing protein 1 (CDCP1) is a type I transmembrane glycoprotein encoded by the CDCP1 gene and expressed on the cell surface of epithelial and tumor cells. CDCP1 contains three extracellular CUB domains and a cytoplasmic signaling region that participates in pathways controlling cell adhesion, migration, and survival. The CDCP1 Antibody / SIMA135 recognizes this membrane-associated protein and supports research investigating mechanisms of tumor progression, epithelial cell signaling, and metastasis biology.

CDCP1 is widely known in the literature by several alternative names including CD318 and SIMA135, reflecting its discovery through subtractive immunization experiments that identified a 135 kDa membrane glycoprotein associated with metastatic potential. SIMA135 antibody reagents therefore target the same protein that is now more commonly referred to as CDCP1. CDCP1 antibody and CD318 antibody are frequently used interchangeably in studies examining tumor cell invasion, extracellular matrix interaction, and oncogenic signaling networks.

The CDCP1 protein contains an extracellular domain composed of CUB domains that mediate protein-protein interactions and may contribute to regulation of cell adhesion. The intracellular cytoplasmic region contains tyrosine residues that become phosphorylated by Src family kinases following activation. Phosphorylation of CDCP1 promotes recruitment of signaling molecules involved in cytoskeletal remodeling and cell motility. Through these signaling events, CDCP1

contributes to cellular processes that regulate epithelial detachment, migration, and resistance to apoptosis.

In normal physiology CDCP1 expression is generally low in most adult tissues but can be detected in epithelial compartments where dynamic cell adhesion and migration occur. In contrast, increased expression of CDCP1 has been reported in multiple cancers including lung, colorectal, pancreatic, breast, and ovarian tumors. Elevated CDCP1 expression has been associated with enhanced metastatic behavior and tumor cell survival in several experimental models. Because of these roles, CDCP1 has been studied as a potential biomarker and therapeutic target in oncology research.

CDCP1 antibody reagents are widely used to investigate the localization and expression of this membrane protein in cultured cells and tissue specimens. A CDCP1 Antibody / SIMA135 can assist in studies examining epithelial cell signaling, tumor cell migration, and the molecular pathways that regulate cancer progression. Because the protein is primarily localized to the plasma membrane and cytoplasmic signaling complexes, antibodies directed against CDCP1 provide useful tools for analyzing membrane-associated signaling events and the regulation of metastatic behavior in cancer biology.

Application Notes

Optimal dilution of the CDCP1 antibody should be determined by the researcher.

1. Required HIER for FFPE samples: Boil the paraffin sections in pH 6, 10mM citrate buffer for 20 minutes and allow to cool prior to testing.

Immunogen

Amino acids R582-T667 of the human protein were used as the immunogen for the CDCP1 antibody.

Storage

After reconstitution, the CDCP1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

CDCP1 antibody, CD318 antibody, SIMA135 antibody, CUB domain containing protein 1 antibody, Subtractive immunization M plus HEp3 associated 135 kDa protein antibody

References (1)