

Rabbit anti-Human, Mouse CEACAM1 Polyclonal Antibody | anti-CEACAM1 antibody

CEACAM1 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA326330	Rabbit	Human, Mouse	ELISA, Immunohistochemistry, Western Blot

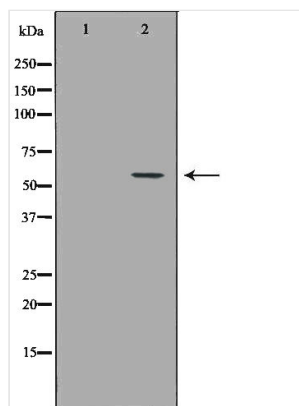
PRODUCT SYNONYMS

CEACAM1; Polyclonal Antibody; CEACAM1 Antibody; Antigen CD66; BGP 1; BGP; BGP-1; BGPI; Biliary glycoprotein 1; Biliary glycoprotein adhesion molecule; Biliary glycoprotein; Carcinoembryonic antigen related cell adhesion molecule 1; carcinoembryonic antigen-related cell adhesion molecule 1 (biliary glycoprotein); Carcinoembryonic antigen-related cell adhesion molecule 1; CD66a; CD66a antigen; CEAM1_HUMAN; meconium antigen 100; anti-CEACAM1 antibody

PRODUCT SPECIFICATIONS

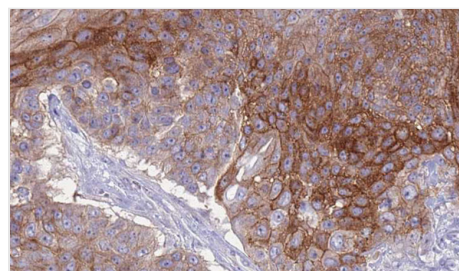
Host	Rabbit
Reactivity	Human, Mouse
Clonality	Polyclonal
Isotype	IgG
Specificity	CEACAM1 antibody detects endogenous levels of total CEACAM1
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin (Thermo Fisher Scientific).
Form/Format	Liquid; Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	464
Applicable Applications for anti-CEACAM1 antibody	ELISA, IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human CEACAM1, corresponding to a region within C-terminal amino acids.
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



WB (Western Blot)

Western blot analysis of Hepg2 whole cell lysates, using CEACAM1 Antibody. The lane on the left is treated with the antigen-specific peptide.



IHC (Immunohistochemistry)

AAA326330 at 1/100 staining Human urothelial cancer tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.

Related Product Information for anti-CEACAM1 antibody

Description: This gene encodes a member of the carcinoembryonic antigen (CEA) gene family, which belongs to the immunoglobulin superfamily. Two subgroups of the CEA family, the CEA cell adhesion molecules and the pregnancy-specific glycoproteins, are located within a 1.2 Mb cluster on the long arm of chromosome 19. Eleven pseudogenes of the CEA cell adhesion molecule subgroup are also found in the cluster. The encoded protein was originally described in bile ducts of liver as biliary glycoprotein. Subsequently, it was found to be a cell-cell adhesion molecule detected on leukocytes, epithelia, and endothelia. The encoded protein mediates cell adhesion via homophilic as well as heterophilic binding to other proteins of the subgroup. Multiple cellular activities have been attributed to the encoded protein, including roles in the differentiation and arrangement of tissue three-dimensional structure, angiogenesis, apoptosis, tumor suppression, metastasis, and the modulation of innate and adaptive immune responses. Multiple transcript variants encoding different isoforms have been reported, but the full-length nature of all variants has not been defined.

Function: Isoform 1: Cell adhesion protein that mediates homophilic cell adhesion in a calcium-independent manner (By similarity). Plays a role as coinhibitory receptor in immune response, insulin action and functions also as an activator during angiogenesis (PubMed:18424730, PubMed:23696226, PubMed:25363763). Its coinhibitory receptor function is phosphorylation-and PTPN6-dependent, which in turn, suppress signal transduction of associated receptors by dephosphorylation of their downstream effectors. Plays a role in immune response, of T cells, natural killer (NK) and neutrophils (PubMed:18424730, PubMed:23696226). Upon TCR/CD3 complex stimulation, inhibits TCR-mediated cytotoxicity by blocking granule exocytosis by mediating homophilic binding to adjacent cells, allowing interaction with and phosphorylation by LCK and interaction with the TCR/CD3 complex which recruits PTPN6 resulting in dephosphorylation of CD247 and ZAP70 (PubMed:18424730). Also inhibits T cell proliferation and cytokine production through inhibition of JNK cascade and plays a crucial role in regulating autoimmunity and anti-tumor immunity by inhibiting T cell through its interaction with HAVCR2 (PubMed:25363763). Upon natural killer (NK) cells activation, inhibit KLRK1-mediated cytolysis of CEACAM1-bearing tumor cells by trans-homophilic interactions with CEACAM1 on the target cell and lead to cis-interaction between CEACAM1 and KLRK1, allowing PTPN6 recruitment and then VAV1 dephosphorylation (PubMed:23696226). Upon neutrophils activation negatively regulates IL1B production by recruiting PTPN6 to a SYK-TLR4-CEACAM1 complex, that dephosphorylates SYK, reducing the production of reactive oxygen species (ROS) and lysosome disruption, which in turn, reduces the activity of the inflammasome. Downregulates neutrophil production by acting as a coinhibitory receptor for CSF3R by downregulating the CSF3R-STAT3 pathway through recruitment of PTPN6 that dephosphorylates CSF3R (By similarity). Also regulates insulin action by promoting INS clearance and regulating lipogenesis in liver through regulating insulin signaling (By similarity). Upon INS stimulation, undergoes phosphorylation by INSR leading to INS clearance by increasing receptor-mediated insulin endocytosis. This internalization promotes interaction with FASN leading to receptor-mediated insulin degradation and to reduction of FASN activity leading to negative regulation of fatty acid synthesis. INSR-mediated phosphorylation also provokes a down-regulation of cell proliferation through SHC1 interaction resulting in decrease coupling of SHC1 to the MAPK3/ERK1-MAPK1/ERK2 and phosphatidylinositol 3-kinase pathways (By similarity). Functions as activator in angiogenesis by promoting blood vessel remodeling through endothelial cell differentiation and migration and in arteriogenesis by increasing the number of collateral arteries and collateral vessel calibers after ischemia. Also regulates vascular permeability through the VEGFR2 signaling pathway resulting in control of nitric oxide production (By similarity). Downregulates cell growth in response to EGF through its interaction with SHC1 that mediates interaction with EGFR resulting in decrease coupling of SHC1 to the MAPK3/ERK1-MAPK1/ERK2 pathway (By similarity). Negatively regulates platelet aggregation by decreasing platelet adhesion on type I collagen through the GPVI-FcRgamma complex (By similarity). Inhibits cell migration and cell scattering through interaction with FLNA; interferes with the interaction of FLNA with RALA (PubMed:16291724). Mediates bile acid transport activity in a phosphorylation dependent manner (By similarity). Negatively regulates osteoclastogenesis (By similarity).

Subunit Structure: Monomer. Oligomer. Heterodimer. Homodimer. Cis-dimer/oligomer (via Ig-like C2-type and/or via cytoplasmic domains); induced by trans-homophilic cell adhesion through an allosteric mechanism transmitted by the Ig-like V-type domain, and is regulated by intracellular calcium and calmodulin. Interacts (via cytoplasmic domain) with calmodulin in a calcium dependent manner; reduces homophilic cell adhesion through dissociation of dimer (By similarity). Isoform 1 interacts (via cytoplasmic domain) with PTPN11 (preferentially) and PTPN6; cis-homodimer form is preferred; this interaction is decreased by formation of Isoform 1/Isoform 8 cis-heterodimers and is dependent on the monomer/dimer equilibrium; this interaction is phosphorylation-dependent (PubMed:23696226). Isoform 1 interacts with LYN (By similarity). Isoform 1 interacts (via cytoplasmic domain) with SRC (via SH2 domain); this interaction is regulated by trans-homophilic cell adhesion (PubMed:7478590). Isoform 1 interacts (via cytoplasmic domain) with LCK; mediates phosphorylation at Tyr-493 and Tyr-520 resulting in PTPN6 association. Isoform 1 interacts with PTPN6; this interaction is phosphorylation-dependent and causes a profound decrease in TCR stimulation-induced CD247 and ZAP70 phosphorylation. Isoform 1 interacts with TCR/CD3 complex through TCR beta chain and CD3E; colocalizes at the cell surface and upon stimulation of the TCR/CD3 complex recruits PTPN6 in the TCR/CD3 complex, resulting in dephosphorylation of CD247 and ZAP70 (PubMed:18424730). Isoform 1 interacts (via cytoplasmic domain) with SHC1 (via SH2 domain); SHC1 mediates interaction with INSR or EGFR in a Ser-508 phosphorylation-dependent manner (By similarity). Isoform 1 interacts with EGFR; the interaction is indirect (PubMed:15467833). Isoform 1 interacts with CSF3R; down-regulates the CSF3R-STAT3 pathway through recruitment of PTPN6 that dephosphorylates CSF3R (By similarity). Isoform 1 (phosphorylated form) interacts with TLR4 and SYK; recruits PTPN6 that dephosphorylates SYK, reducing the production of reactive oxygen species (ROS) and lysosome disruption, leading to a reduction of the inflammasome activity (By similarity). Isoform 1 interacts with FLNA; inhibits cell migration and cell scattering by interfering with the interaction of FLNA with RALA (PubMed:16291724). Isoform 1 interacts (via cytoplasmic domain) with PXN; the interaction is phosphotyrosyl-dependent (PubMed:11035932). Isoform 1 interacts with KLRK1; recruits PTPN6 that dephosphorylates VAV1 (PubMed:23696226). Isoform 1 interacts with CEACAM8 (PubMed:11994468). Isoform 1

NCBI AND UNIPROT INFORMATION

NCBI GI #	68161541
NCBI GeneID	634
NCBI Accession #	NP_001020083.1
NCBI GenBank Nucleotide #	NM_001024912.2
UniProt Accession #	P13688; O60430; Q069I7; Q13854; Q13857; Q13858; Q13859; Q13860; Q15600; Q15601; A6NE38; A8MY49
Molecular Weight	58kDa
NCBI Official Full Name	carcinoembryonic antigen-related cell adhesion molecule 1 isoform 2
NCBI Official Synonym Full Names	carcinoembryonic antigen related cell adhesion molecule 1
NCBI Official Symbol	CEACAM1
NCBI Official Synonym Symbols	BGP; BGP1; BGPI
NCBI Protein Information	carcinoembryonic antigen-related cell adhesion molecule 1
UniProt Protein Name	Carcinoembryonic antigen-related cell adhesion molecule 1
UniProt Gene Name	CEACAM1
UniProt Synonym Gene Names	BGP-1

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

AAA Biotech | Tel: +1 (619) 604-9440 | Fax: +1 (619) 604-9441 | contact@aaabiotech.com
Online datasheet: <https://stage.aaabiotech.com/polyclonal/ceacam1-antibody-immunohistochemistry-western-blot-elisa/326330>