abcam

ab91213

Anti-CEACAM1 + CEACAM5 antibody [4/3/17]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.2 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Native Full Length Protein corresponding to Human CEACAM1. Database link P13688
Carrier free	Yes
Clone number	4/3/17
Purification technique	Affinity purification Protein G
Specificity	Does not recognise CEACAM3, CEACAM6 or CEACAM8
Concentration	2 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1.2 µg for 10^6 Cells

Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Target data

See full target information CEACAM5

Function	Cell surface glycoprotein that plays a role in cell adhesion, intracellular signaling and tumor progression (PubMed:10864933, PubMed:10910050, PubMed:2803308). Mediates homophilic and heterophilic cell adhesion with other carcinoembryonic antigen-related cell adhesion molecules, such as CEACAM6 (PubMed:2803308). Plays a role as an oncogene by promoting tumor progression; induces resistance to anoikis of colorectal carcinoma cells (PubMed:10910050). (Microbial infection) Receptor for E.coli Dr adhesins. Binding of E.coli Dr adhesins leads to dissociation of the homodimer.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	CEACAM1 and CEACAM5 are members of the carcinoembryonic antigen (CEA) family also referred to as CD66a and CD66e respectively. CEACAM1 with a molecular weight of approximately 120 kDa and CEACAM5 weighing around 200 kDa serve as cell surface glycoproteins. They localize primarily on epithelial cells and are also expressed in immune cells such as neutrophils and lymphocytes. These proteins mediate intercellular interactions and play roles in cell adhesion and signaling.
Biological function summary	These CEACAM proteins modulate immune responses and maintain epithelial tissue architecture. CEACAM1 acts as a regulator of immune cell signaling and participates in microbial recognition. It is part of complexes with other signaling molecules due to its cytoplasmic domain that interacts with intracellular adaptors.

	CEACAM5 enhances cell adhesion and is important for maintaining cellular integrity.
Pathways	CEACAM1 and CEACAM5 participate in immune and signaling pathways. CEACAM1 modulates the PI3K-Akt pathway influencing cell proliferation and survival. It associates closely with proteins such as SHP-1 and SHP-2 which act as phosphatase regulators. CEACAM5 is involved in the MAPK pathway which influences cell growth regulation and is linked to cellular responses to external stimuli.
Associated diseases and disorders	CEACAM1 and CEACAM5 are associated with cancer and inflammatory diseases. CEACAM5 is a known biomarker for colorectal cancer where it can be overexpressed leading to tumor progression. CEACAM1 correlates with melanoma as its expression levels can affect tumor immune evasion. Both proteins are targets for therapeutic interventions in cancer interacting with immune checkpoint molecules like PD-1 in tumor environments.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

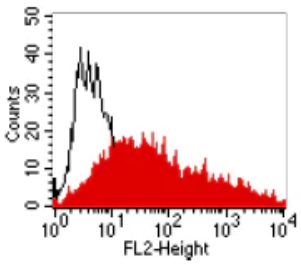
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

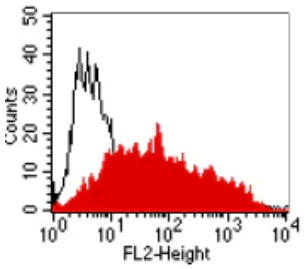
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3 product images



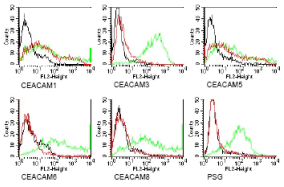
Flow Cytometry - Anti-CEACAM1 + CEACAM5 antibody [4/3/17] (ab91213)

ab91213 at 1.2µg/10^6 cells in BOSC23 cells transiently transfected with an expression vector encoding either CEACAM1 (red curve) or a control protein (black curve). A PE conjugated secondary antibody was used.



Flow Cytometry - Anti-CEACAM1 + CEACAM5 antibody [4/3/17] (ab91213)

ab91213 at 1.2µg/10^6 cells in BOSC23 cells transiently transfected with an expression vector encoding either CEACAM5 (red curve) or a control protein (black curve). A PE conjugated secondary antibody was used.



Flow Cytometry - Anti-CEACAM1 + CEACAM5 antibody [4/3/17] (ab91213)

Specificity testing of ab91213. BOSC23 cells were transiently transfected with expression vectors containing either the cDNA of CEACAM1, 3, 5, 6, 8 or a recombinant transmembrane-anchored PSG1 fusion protein. Expression of the constructs was confirmed with monoclonal antibodies known to recognise the corresponding proteins (green curves). An irrelevant monoclonal antibody served as a negative control (black curves). For specificity testing, protein G purified ab91213 was tested on all CEACAM transfectants. A positive signal was obtained with CEACAM1 and CEACAM5 expressing cells (red curves).

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