

Product datasheet

Anti-CEACAM5 + CD66b + CEACAM1 + CEACAM6 antibody [EPR20721] ab207718

Recombinant RabMAb

[1 References](#) [10 Images](#)

Overview

Product name	Anti-CEACAM5 + CD66b + CEACAM1 + CEACAM6 antibody [EPR20721]
Description	Rabbit monoclonal [EPR20721] to CEACAM5 + CD66b + CEACAM1 + CEACAM6
Host species	Rabbit
Specificity	ab207718 cross-reacts with CEACAM 1, 6 and 8. There are other CEACAM family members but we only examined cross-reactivity with those having >55% homology with CEACAM5 following a BLAST search with the immunogen.
Tested applications	Suitable for: WB, IHC-P, ICC/IF, Flow Cyt
Species reactivity	Reacts with: Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: His-GST-tagged human CEACAM5 recombinant protein (aa238-686), His-tagged human CEACAM6 recombinant protein (aa35-326), CEACAM8 recombinant protein (aa35-335) and CEACAM1 recombinant protein (aa35-428). MCF7, LoVo and Caco-2 whole cell lysate. Human colon lysate. IHC-P: Human colon and colon cancer tissue. Human spleen tissue, HEK-293T cells transfected with a CEACAM3, CEACAM5 and CEACAM8 expression vector containing a his tag. ICC/IF, Flow Cyt: MCF7 cells.
General notes	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none">- High batch-to-batch consistency and reproducibility- Improved sensitivity and specificity- Long-term security of supply- Animal-free production <p>For more information see here.</p> <p>Our RabMAb[®] technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb[®] patents.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle.

Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR20721
Isotype	IgG

Applications

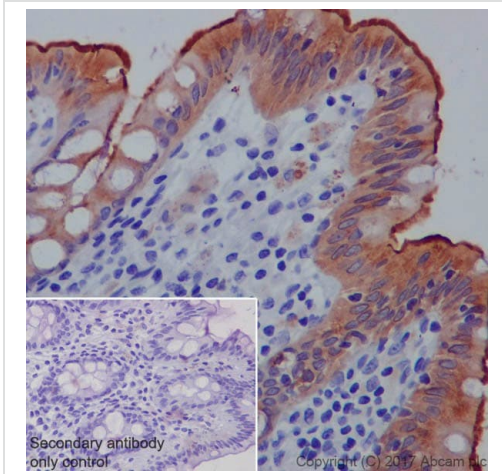
The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab207718 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/1000. Predicted molecular weight: 76 kDa.
IHC-P		1/5000 - 1/40000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
ICC/IF		1/500.
Flow Cyt		1/500.

Target

Cellular localization	CEACAM5: Cell membrane. CD66b: Cell membrane. CEACAM1: Secreted; Cell membrane and Cell membrane. Localizes to sites of cell-cell contact. CEACAM6: Cell membrane.
Form	CEACAM1: There are 11 isoforms produced by alternative splicing. Isoform 1 = BGP _a ; CEACAM1-4L; TM1-CEA; Isoform 2 = BGP _g ; CEACAM1-4C1; Isoform 3 = BGP _h ; CEACAM1-3; Isoform 4 = BGP _i ; CEACAM1-3C2; Isoform 5 = BGP _y ; CEACAM1-3AL; Isoform 6 = BGP _b ; CEACAM1-3L; TM2-CEA; Isoform 7 = BGP _x ; CEACAM1-1L; Isoform 8 = BGP _c ; CEACAM1-4S; TM3-CEA; Isoform 9 = BGP _z ; CEACAM1-3AS and Isoform 11 = BGP _d ; CEACAM1-3S.

Images

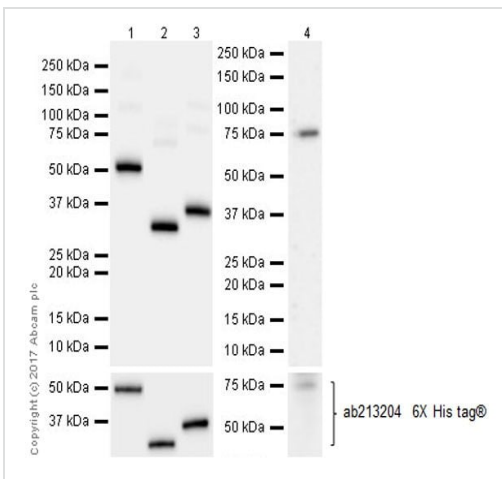


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Carcino Embryonic Antigen CEA antibody [EPR20721] (ab207718)

Immunohistochemical analysis of paraffin-embedded human colon tissue labeling Carcino Embryonic Antigen CEA with ab207718 at 1/40,000 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Positive staining in human colon (PMID: 25042385) is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

Perform heat mediated antigen retrieval using **ab93684** (Tris/EDTA buffer, pH 9.0).



Western blot - Anti-Carcino Embryonic Antigen CEA antibody [EPR20721] (ab207718)

All lanes : Anti-CEACAM5 + CD66b + CEACAM1 + CEACAM6 antibody [EPR20721] (ab207718) at 1/1000 dilution

Lane 1 : His-GST-tagged human CEACAM5 recombinant protein (aa238-686) 10 ng

Lane 2 : His-tagged human CEACAM6 recombinant protein (aa35-326) 10 ng

Lane 3 : His-tagged human CEACAM8 recombinant protein (aa35-335) 10 ng

Lane 4 : His-tagged human CEACAM1 recombinant protein (aa35-428) 10 ng

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Developed using the ECL technique.

Predicted band size: 76 kDa

Observed band size: 30,50,75 kDa

Additional bands at: 32 kDa (possible post-translational modification)

Blocking/ Dilution buffer and concentration: 5% NFDm/TBST.

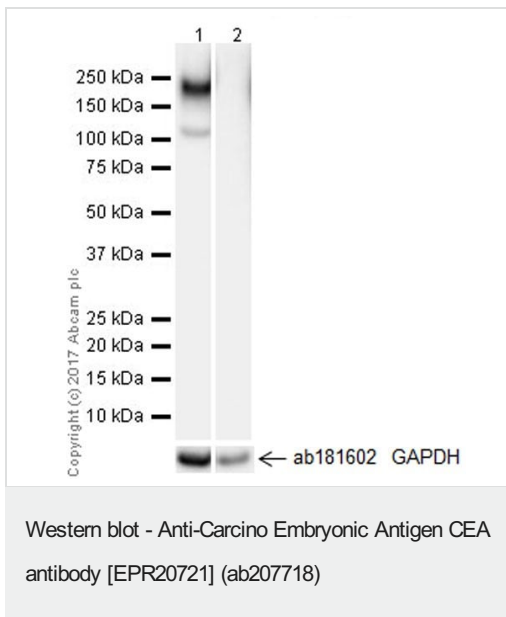
Exposure times:

Lanes 1-3: 10 seconds

Lane 4: 4 minutes

Observed MW: 50, 30, 32, 75 kDa.

The blot was developed on a BIO-RAD® ChemiDoc™ MP instrument.



All lanes : Anti-CEACAM5 + CD66b + CEACAM1 + CEACAM6 antibody [EPR20721] (ab207718) at 1/1000 dilution

Lane 1 : MCF7 (human breast adenocarcinoma epithelial cell), whole cell lysate

Lane 2 : PANC-1 (human pancreatic epithelioid carcinoma epithelial cell), whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Developed using the ECL technique.

Predicted band size: 76 kDa

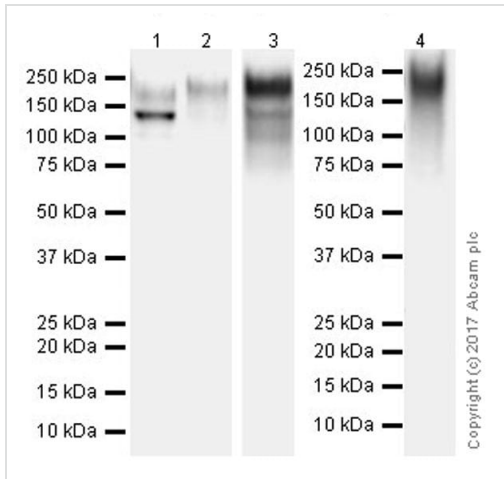
Observed band size: 110-150,75-90 kDa

Exposure time: 58 seconds

Blocking/ Dilution buffer and concentration: 5% NFDm/TBST.

Observed MW: 110-150, 75-90 kDa.

The blot was developed on a BIO-RAD® ChemiDoc™ MP instrument.



Western blot - Anti-Carcino Embryonic Antigen CEA antibody [EPR20721] (ab207718)

All lanes : Anti-CEACAM5 + CD66b + CEACAM1 + CEACAM6 antibody [EPR20721] (ab207718) at 1/1000 dilution

Lane 1 : Caco-2 (human colorectal adenocarcinoma epithelial cell), whole cell lysate at 10 µg

Lane 2 : SW480 (human colorectal adenocarcinoma epithelial cell), whole cell lysate at 10 µg

Lane 3 : Human colon lysate at 20 µg

Lane 4 : LoVo (human colorectal adenocarcinoma epithelial cell), whole cell lysate at 10 µg

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Developed using the ECL technique.

Predicted band size: 76 kDa

Observed band size: 110-150,75-90 kDa

Blocking/ Dilution buffer and concentration: 5% NFDM/TBST.

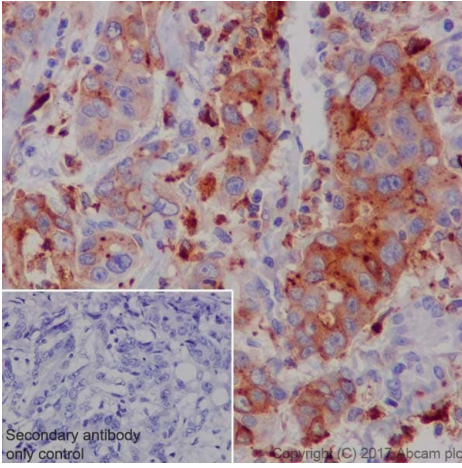
Exposure times:

Lanes 1-2: 3 minutes

Lanes 3-4: 10 seconds

Observed MW 110-150, 75-90 kDa.

The blot was developed on a BIO-RAD[®] ChemiDoc[™] MP instrument. The expression profile observed is consistent with differential glycosylation of this protein (PMID: 1717152).

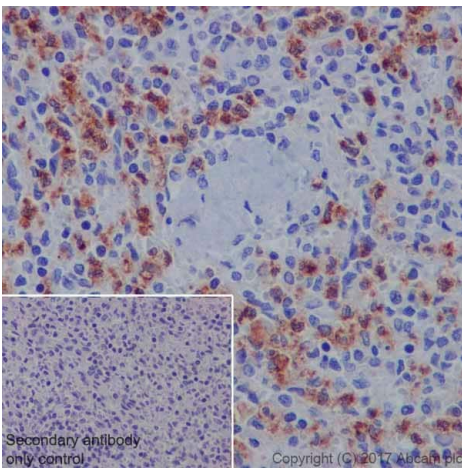


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Carcino Embryonic Antigen CEA antibody [EPR20721] (ab207718)

Immunohistochemical analysis of paraffin-embedded human colon cancer tissue labeling Carcino Embryonic Antigen CEA with ab207718 at 1/40,000 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Positive staining in human colon cancer (PMID: 25042385) is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

Perform heat mediated antigen retrieval using [ab93684](#) (Tris/EDTA buffer, pH 9.0).

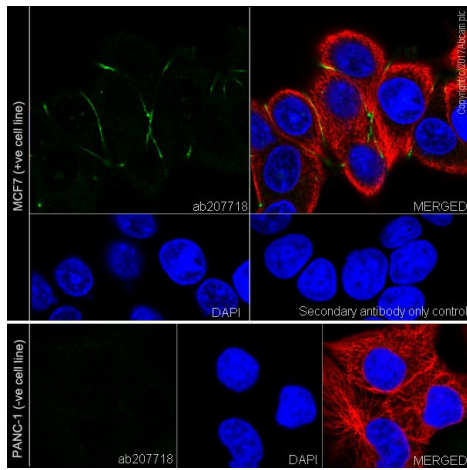


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Carcino Embryonic Antigen CEA antibody [EPR20721] (ab207718)

Immunohistochemical analysis of paraffin-embedded human spleen tissue labeling Carcino Embryonic Antigen CEA with ab207718 at 1/40,000 dilution, followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP). Positive staining of spleen-infiltrating neutrophils (PMID: 22064717 and 19077207) is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is a ready to use Goat Anti-Rabbit IgG H&L (HRP).

Perform heat mediated antigen retrieval using [ab93684](#) (Tris/EDTA buffer, pH 9.0).



Immunocytochemistry/ Immunofluorescence - Anti-Carcino Embryonic Antigen CEA antibody [EPR20721] (ab207718)

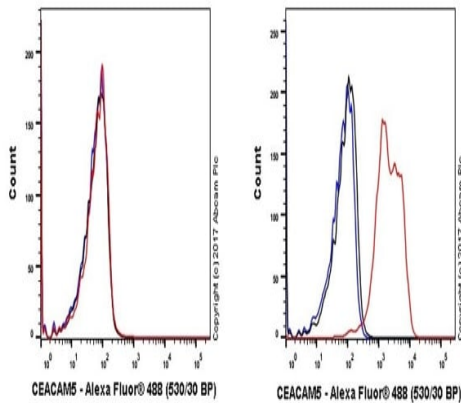
Immunofluorescent analysis of 100% methanol fixed MCF7 (human breast adenocarcinoma epithelial cell) cells labeling Carcino Embryonic Antigen CEA with ab207718 at 1/500 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) ([ab150077](#)) secondary antibody at 1/1000 dilution (green).

Confocal image showing membranous staining on MCF7 cell line.

Negative control for cells: PANC-1 .

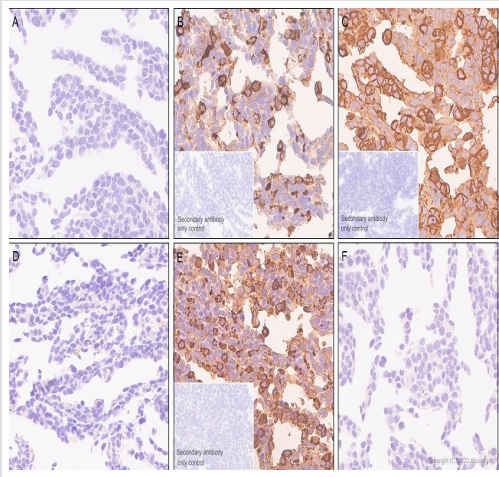
Counterstained with [ab195889](#) anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) at a 1/200 dilution (red) and DAPI (blue).

The negative control is the secondary antibody only.



Flow Cytometry - Anti-Carcino Embryonic Antigen CEA antibody [EPR20721] (ab207718)

Flow cytometric analysis of PANC-1 (human pancreatic epithelioid carcinoma epithelial cell) (Left) / MCF7 (human breast adenocarcinoma epithelial cell) (Right) labeling Carcino Embryonic Antigen CEA with ab207718 at 1/500 (red) compared with a Rabbit monoclonal IgG ([ab172730](#)) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat anti rabbit IgG (Alexa Fluor® 488, [ab150077](#)), at 1/2000 dilution was used as the secondary antibody. Cells were not fixed or permeabilized. Gated on total viable cells.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CEACAM5 + CD66b + CEACAM1 + CEACAM6 antibody [EPR20721] (ab207718)

Immunohistochemistry analysis of paraffin-embedded (A) HEK-293T cells transfected with a CEACAM1 expression vector containing a his tag, (B) HEK-293T cells transfected with a CEACAM3 expression vector containing a his tag, (C) HEK-293T cells transfected with a CEACAM5 expression vector containing a his tag, (D) HEK-293T cells transfected with a CEACAM6 expression vector containing a his tag, (E) HEK-293T cells transfected with a CEACAM8 expression vector containing a his tag, (F) HEK-293T cells transfected with empty vector containing a his tag, sections labelling CEACAM5 + CD66b + CEACAM1 + CEACAM6 with ab207718 at 1/5000 dilution. The section was incubated with ab207718 for 30 mins at room temperature. LeicaDS9800 (Bond™ Polymer Refine Detection) was used as the secondary antibody. Sections were counterstained with Hematoxylin. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins. Positive staining on (B) HEK-293T cells transfected with a CEACAM3 expression vector containing a his tag, (C) HEK-293T cells transfected with a CEACAM5 expression vector containing a his tag, (E) HEK-293T cells transfected with a CEACAM8 expression vector containing a his tag. Nearly no staining on (A) HEK-293T cells transfected with a CEACAM1 expression vector containing a his tag, (D) HEK-293T cells transfected with a CEACAM6 expression vector containing a his tag and (F) HEK-293T cells transfected with empty vector containing a his tag. The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

Why choose a recombinant antibody?

 <p>Research with confidence Consistent and reproducible results</p>	 <p>Long-term and scalable supply Recombinant technology</p>
 <p>Success from the first experiment Confirmed specificity</p>	 <p>Ethical standards compliant Animal-free production</p>

Anti-Carcino Embryonic Antigen CEA antibody [EPR20721] (ab207718)

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