

## Product datasheet

# Anti-CEACAM1 antibody [EPR4048] ab108390

Recombinant RabMAb

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### Overview

<b>Product name</b>	Anti-CEACAM1 antibody [EPR4048]
<b>Description</b>	Rabbit monoclonal [EPR4048] to CEACAM1
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> WB, IHC-P <b>Unsuitable for:</b> Flow Cyt, ICC/IF or IP
<b>Species reactivity</b>	<b>Reacts with:</b> Human
<b>Immunogen</b>	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	WB: HepG2 cell lysate, A549 cell lysate, Human fetal liver tissue lysate, Human liver tissue and His-tagged human CEAM-1 fragment. IHC-P: Human kidney tissue, HEK-293T cells transfected with a CEACAM1 expression vector containing a his tag, HEK-293T cells transfected with a CEACAM3 expression vector containing a his tag and HEK-293T cells transfected with a CEACAM5 expression vector containing a his tag.
<b>General notes</b>	<p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"><li>- High batch-to-batch consistency and reproducibility</li><li>- Improved sensitivity and specificity</li><li>- Long-term security of supply</li><li>- Animal-free production</li></ul> <p>For more information <a href="#">see here</a>.</p> <p>Our RabMAb<sup>®</sup> technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to <a href="#">RabMAb<sup>®</sup> patents</a>.</p> <p>Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.</p>

### Properties

<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
<b>Storage buffer</b>	pH: 7.20 Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 40% Glycerol (glycerin, glycerine), 9.85% Tris glycine, 50% Tissue

	culture supernatant
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR4048
<b>Isotype</b>	IgG

## Applications

**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab108390 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
<b>WB</b>		1/1000 - 1/10000. Predicted molecular weight: 58 kDa.
<b>IHC-P</b>		1/100 - 1/2000. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

**Application notes** Is unsuitable for Flow Cyt, ICC/IF or IP.

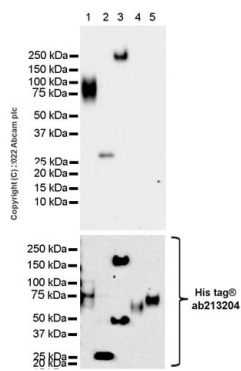
## Target

**Sequence similarities** Belongs to the immunoglobulin superfamily. CEA family.  
Contains 3 Ig-like C2-type (immunoglobulin-like) domains.  
Contains 1 Ig-like V-type (immunoglobulin-like) domain.

**Cellular localization** Secreted; Cell membrane and Cell membrane. Localizes to sites of cell-cell contact.

**Form** There are 11 isoforms produced by alternative splicing. Isoform 1 = BGP<sub>a</sub>; CEACAM1-4L; TM1-CEA; Isoform 2 = BGP<sub>g</sub>; CEACAM1-4C1; Isoform 3 = BGP<sub>h</sub>; CEACAM1-3; Isoform 4 = BGP<sub>i</sub>; CEACAM1-3C2; Isoform 5 = BGP<sub>y</sub>; CEACAM1-3AL; Isoform 6 = BGP<sub>b</sub>; CEACAM1-3L; TM2-CEA; Isoform 7 = BGP<sub>x</sub>; CEACAM1-1L; Isoform 8 = BGP<sub>c</sub>; CEACAM1-4S; TM3-CEA; Isoform 9 = BGP<sub>z</sub>; CEACAM1-3AS and Isoform 11 = BGP<sub>d</sub>; CEACAM1-3S.

## Images



Western blot - Anti-CEACAM1 antibody [EPR4048] (ab108390)

**All lanes** : Anti-CEACAM1 antibody [EPR4048] (ab108390) at 1/1000 dilution

**Lane 1** : His-tagged human CEAM-1 fragment

**Lane 2** : His-tagged human CEAM-3 fragment

**Lane 3** : His-tagged human CEAM-5 fragment

**Lane 4** : His-tagged human CEAM-6 fragment

**Lane 5** : His-tagged human CEAM-8 fragment

Lysates/proteins at 0.01 µg per lane.

### Secondary

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

**Predicted band size:** 58 kDa

**Observed band size:** 66 kDa

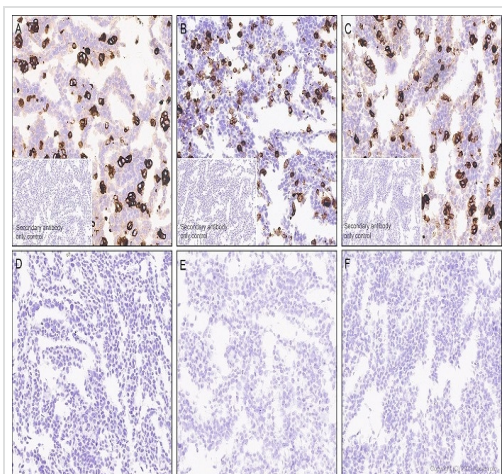
**Additional bands at:** 180 kDa (possible cross reactivity), 25 kDa (possible cross reactivity)

**Exposure time:** 37 seconds

**Blocking buffer and concentration:** 5% NFDM/TBST

**Diluting buffer and concentration:** 5% NFDM/TBST

This antibody cross-reacts with CEAM-3 and CEAM-5.



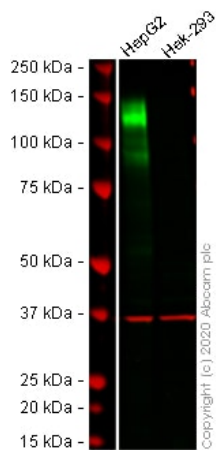
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CEACAM1 antibody [EPR4048] (ab108390)

Immunohistochemical analysis of paraffin-embedded sections (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.

This was labelling CEACAM1 with ab108390 at 1/2000 dilution. The section was incubated with ab108390 for 30 mins at room temperature. LeicaDS9800 (Bond™ Polymer Refine Detection) was used as the secondary antibody. Sections were counter stained with hematoxylin. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.

Positive staining on (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 and (C) HEK-293T cells transfected with a CEACAM5 expression vector containing a his tag. No staining on (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 and (F) HEK-293T cells transfected with empty vector containing a his tag. The results indicated cross reaction with CEACAM1, CEACAM3 and CEACAM5.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Western blot - Anti-CEACAM1 antibody [EPR4048] (ab108390)

**All lanes** : Anti-CEACAM1 antibody [EPR4048] (ab108390) at 1/1000 dilution

**Lane 1** : HepG2 cell lysate

**Lane 2** : HEK-293 cell lysate

Lysates/proteins at 20 µg per lane.

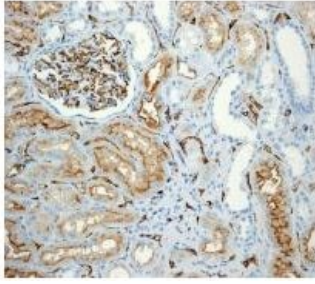
Performed under reducing conditions.

**Predicted band size:** 58 kDa

**Observed band size:** 45 kDa

**Lanes 1 - 2:** Merged signal (red and green). Green - ab108390 observed at 125 kDa. Red - loading control **ab8245** (Mouse anti-GAPDH antibody [6C5]) observed at 37kDa.

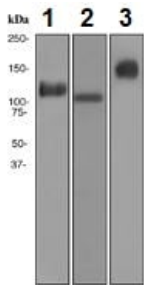
ab108390 was shown to react with CEACAM1 in western blot. Membranes were blocked in 3% milk in TBS-T (0.1% Tween®) before incubation with ab108390 and **ab8245** (Mouse anti-GAPDH antibody [6C5]) overnight at 4°C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were incubated with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CEACAM1 antibody [EPR4048] (ab108390)

ab108390, at 1/100 dilution, staining CEACAM1 in Human kidney tissue by immunohistochemistry.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Western blot - Anti-CEACAM1 antibody [EPR4048] (ab108390)

**All lanes** : Anti-CEACAM1 antibody [EPR4048] (ab108390) at 1/1000 dilution

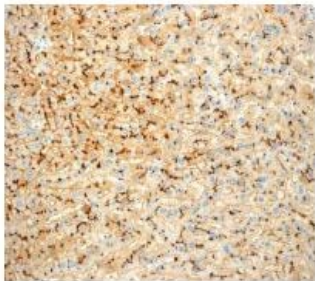
**Lane 1** : HepG2 cell lysate

**Lane 2** : Human fetal liver tissue lysate

**Lane 3** : A549 cell lysate

Lysates/proteins at 10 µg per lane.

**Predicted band size:** 58 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CEACAM1 antibody [EPR4048] (ab108390)

ab108390, at 1/100 dilution, staining CEACAM1 in Human liver tissue by immunohistochemistry.

Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Why choose a recombinant antibody?

**Research with confidence**  
Consistent and reproducible results

**Long-term and scalable supply**  
Recombinant technology

**Success from the first experiment**  
Confirmed specificity

**Ethical standards compliant**  
Animal-free production

Anti-CEACAM1 antibody [EPR4048] (ab108390)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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