



### Anti-human CEACAM-1 (#D1-4)



**FOR RESEARCH ONLY! NOT FOR HUMAN USE!**

<b>Cat.-no.:</b>	<b>102-PA100S</b>
Size:	100 µg
Lot. No.:	According to product label
Country of origin:	Germany

**Preparation:** Produced from sera of rabbits pre-immunized with highly pure (>95%) recombinant human soluble CEACAM-1 (D1-4).

### Target Background

<b>Synonyms:</b>	Carcinoembryo antigen-related cell adhesion molecule 1, CD66a
------------------	---

Carcinoembryonic antigen (CEA)-related cell adhesion molecule 1 (CEACAM1) is a 160 kDa member of the CEACAM branch of the CEA gene family of the immunoglobulin superfamily. It is one of seven human CEACAM subfamily genes that are essentially divided equally between type I trans-membrane proteins (CEACAM1, 3-4) and GPI-linked molecules (CEACAM5-8). There is no CEACAM2 in human. The gene for human CEACAM1 codes for a 526 amino acid (aa) type I transmembrane protein that contains a 34 aa signal sequence, a 394 aa extracellular domain (ECD), a 24 aa transmembrane segment, and a 74aa cytoplasmic region. The ECD contains one N-terminal V-type followed by three C2-type Ig-like domains. It shows considerable glycosylation (1). The cytoplasmic region shows one ITIM motif and a calmodulin binding site. There are three soluble and seven transmembrane isoforms, with variations occurring in both the ECD and cytoplasmic region. All ten alternate splice forms contain the V-type Ig-like domain (aa's 35-142). The three soluble forms also contain the first two C2-type Ig like domains (aa's 145-317), with differences coming in the third C2-type Ig-like domain. The seven transmembrane isoforms are highly divergent. Full-length mouse and rat CEACAM1 are approximately 57% aa identical to human CEACAM1; in the V-type Ig-like domain, they are 58% and 56% aa identical, respectively. The full-length molecule is found on neutrophils, bile duct epithelium, activated NK cells, colonic columnar epithelium and endothelium.

### References

1. Beauchemin et al, Exp Cell Res 252 (1999)
2. Thompson et al, Genomics 12 (1992)
3. Waggener and Ergun, Exp Cell Res 261 (2000)
4. Barnett et al, J Cell Biol 108 (1989)
5. Hinoda et al, Proc Natl Acad Sci 85 (1998)
6. Müller et al, Blood 105 (2006)
7. Kilic et al, Blood 110 (2007)
8. Zengin et al, Development 133 (2006)
9. Oliveira-Ferrer et al, Cancer Res 64 (2004)

### Database References Antigen

<b>Protein RefSeq:</b>	NP_001192273.1
<b>Uniprot ID:</b>	P13688
<b>mRNA RefSeq:</b>	NM_001205344

### Product Specifications

<b>Species reactivity</b>	human
<b>Clone/Ab feature</b>	Rabbit IgG
<b>Cross reactivity</b>	No cross reactivity with hCEACAM-8 but with several other family members.
<b>Host</b>	rabbit
<b>Clonality</b>	polyclonal
<b>Purification</b>	Protein A purified
<b>Immunogen</b>	Recombinant human sCEA-1 (D1-4)
<b>Formulation</b>	lyophilized
<b>Buffer</b>	PBS

**Stability:** The lyophilized antibody is stable at room temperature for up to 1 month. The reconstituted antibody is stable for at least two weeks at 2-8°C. Frozen aliquots are stable for at least 6 months when stored at -20°C.

**Reconstitution:** Centrifuge vial prior to opening. Reconstitute in sterile water to a concentration of 0.1-1.0 mg/ml.



**AVOID REPEATED FREEZE AND THAW CYCLES!**

### Applications

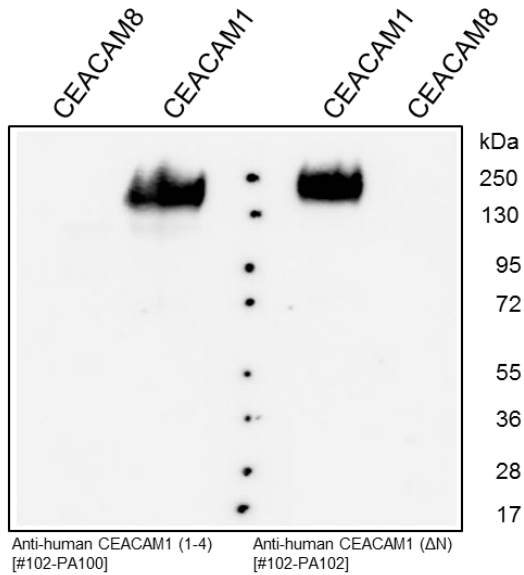
<b>Western Blot:</b>	Use at 1-5 µg/ml
<b>ELISA:</b>	Use at 1-5 µg/ml
<b>FACS</b>	Use at 2-10 µg/ml

**NOTE: OPTIMAL DILUTIONS SHOULD BE DETERMINED BY EACH LABORATORY FOR EACH APPLICATION!**



## Anti-human CEACAM-1 (#D1-4)

### Handling/Applications



**Figure 1: Western Analysis** with anti-human CEACAM1. Both antibodies recognize CEACAM1 but not CEACAM8. Cross reaction with CEACAM3, CEACAM4, CEACAM5, CEACAM6 und CEACAM7 are not tested so far.

The experiment was performed by Dr. Bernhard Singer, University Hospital Essen, Germany