

PRODUCT INFORMATION



CEACAM8/CD66b (human, recombinant)

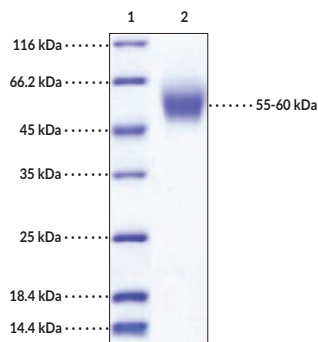
Item No. 31834

Overview and Properties

Synonyms:	Carcinoembryonic Antigen CGM6, Carcinoembryonic Antigen-related Cell Adhesion Molecule 8, CGM6, NCA-95, Non-specific Cross-reacting Antigen NCA-95
Source:	Active recombinant human C-terminal His-tagged CD66b expressed in HEK293 cells
Amino Acids:	35-319
Uniprot No.:	P31997
Molecular Weight:	32.8 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	≥96% estimated by SDS-PAGE
Supplied in:	Lyophilized from sterile PBS, pH 7.4
Endotoxin Testing:	<1.0 EU/μg, determined by the LAL endotoxin assay
Concentration:	<i>batch specific</i> mg/ml
Bioactivity:	See figures for details

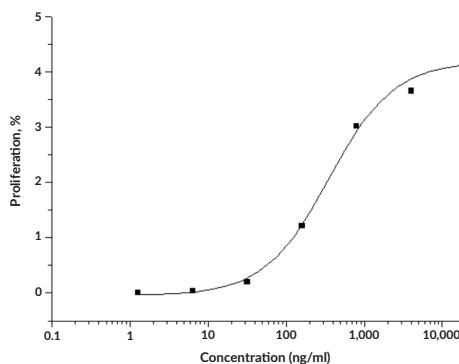
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images



Lane 1: MW Markers
Lane 2: CEACAM8/CD66b

SDS-PAGE Analysis of CEACAM8/CD66b. This protein has a calculated molecular weight of 32.8 kDa. It has an apparent molecular weight of approximately 55-60 kDa by SDS-PAGE under reducing conditions due to glycosylation.



CEACAM8/CD66b Binding in Functional ELISA. Immobilized human CEACAM6-His at 10 μg/ml (100 μl/well) can bind biotinylated human CEACAM8/CD66b-His. The EC_{50} of biotinylated human CEACAM8/CD66b-His is 0.17 μg/ml.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

CD66b, also known as carcinoembryonic antigen-related cell adhesion molecule 8 (CEACAM8), is a member of the carcinoembryonic antigen (CEA) family encoded by *CEACAM8* in humans.^{1,2} It is a single-chain glycoprotein, comprised of N-terminal immunoglobulin (Ig) variable-like (IgV) and Ig constant-like (IgC) domains, that is anchored to the cell membrane by a glycosylphosphatidylinositol (GPI) linker.³ CD66b is expressed exclusively in granulocytes, with neutrophil and eosinophil expression increasing under inflammatory conditions to mediate intercellular adhesion to endothelial cells, signal transduction, and cell activation.^{1,3} The percentage of colonic CD66b⁺ neutrophils is increased and positively correlates with endoscopic disease severity in patients with Crohn's disease.⁴ The percentage of CD66b⁺ neutrophils is also increased in gastric cancer tissues and is associated with poor prognosis.⁵ Cayman's CEACAM8/CD66b (human, recombinant) protein can be used for binding assays. The protein consists of 296 amino acids, has a calculated molecular weight of 32.8 kDa, and a predicted N-terminus of Gln35 after signal peptide cleavage. By SDS-PAGE, under reducing conditions, the apparent molecular mass of the protein is approximately 55 to 60 kDa due to glycosylation.

References

1. Yoon, J., Terada, A., and Kita, H. CD66b regulates adhesion and activation of human eosinophils. *J. Immunol.* **179**(12), 8454-8462 (2007).
2. Skubitz, K.M., Campbell, K.D., and Skubitz, A.P.N. CD66a, CD66b, CD66c, and CD66d each independently stimulate neutrophils. *J. Leukoc. Biol.* **60**(1), 106-117 (1996).
3. Skubitz, K.M. and Skubitz, A.P.N. Interdependency of CEACAM-1, -3, -6, and -8 induced human neutrophil adhesion to endothelial cells. *J. Transl. Med.* **6**, 78 (2008).
4. Therrien, A., Chapuy, L., Bsat, M., *et al.* Recruitment of activated neutrophils correlates with disease severity in adult Crohn's disease. *Clin. Exp. Immunol.* **195**(2), 251-264 (2019).
5. Huang, X., Pan, Y., Ma, J., *et al.* Prognostic significance of the infiltration of CD163⁺ macrophages combined with CD66b⁺ neutrophils in gastric cancer. *Cancer Med.* **7**(5), 1731-1741 (2018).

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