Human CD66b Protein (His & AVI Tag), Biotinylated

Catalog Number: **11729-H27H-B**

General Information

Gene Name Synonym:

CD66b; CD67; CGM6; NCA-95

Protein Construction:

A DNA sequence encoding the human CEACAM8 (NP_001807.2) (Met1-Ser319) was expressed with a c-terminal polyhistidine tagged AVI tag at the C-terminus. The expressed protein was biotinylated in vivo by the Biotin-Protein ligase (BirA enzyme) which is co-expressed.

Source: Human

Expression Host: Human Cells

QC Testing

Biotin/Protein Ratio:

0.7-1 as determined by the HABA assay.

Purity: > 95 % as determined by SDS-PAGE.

Bio-activity:

Measured by its ability to bind recombinant CEACAM6-His (Cat:10823-H08H) in a functional ELISA.

Endotoxin:

<1.0 EU per μg protein as determined by the LAL method.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Gln 35

Molecular Mass:

The recombinant human CEACAM8 consists of 311 amino acids and predicts a molecular mass of 34.7 kDa.

Formulation:

Lyophilized from sterile PBS, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

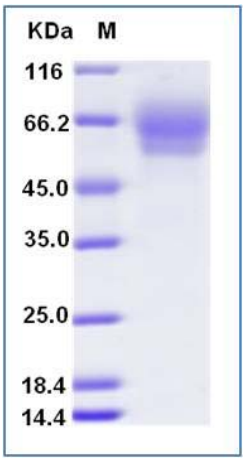
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

CEACAM8, also known as CD66b or NCA-95, is a single chain, GPI-anchored, highly glycosylated protein belonging to the carcinoembryonic antigen family. There are four members in this family: CD66a, CD66b, CD66c, and CD66d. Members of CEACAM family are widely expressed especially on human neutrophils, and, depending on the tissue, capable of regulating diverse functions including tumor promotion, tumor suppression, angiogenesis, and neutrophil activation. Abnormal overexpression and downregulation of some CEACAMs have been described in tumor cells. Monoclonal antibodies grouped in the CD66 cluster recognize CEACAM members. Ectopic CD66 expression is commonly detected in B-cell lineage acute lymphoblastic leukemia (ALL). CEACAM8(CD66b) is also an activation marker for human granulocytes. However, its biological functions are largely unknown in eosinophils. It has been reported that CD66b is highly expressed on the surface of human peripheral blood eosinophils isolated from healthy individuals. Engagement of CD66b by mAb or a natural ligand, galectin-3, activated a Src kinase family molecule, hemopoietic cell kinase (Hck), and induced cellular adhesion, superoxide production, and degranulation of eosinophils. CD66b molecules were localized in lipid rafts, and disruption of lipid rafts or removal of the GPI anchor inhibited the adhesion and activation of eosinophils. Importantly, CD66b was constitutively and physically associated with a beta2 integrin, CD11b, and cross-linking of CD66b induced a striking clustering of CD11b molecules. Thus, CD66b molecules are involved in regulating adhesion and activation of eosinophils, possibly through their localization in lipid rafts and interaction with other cell surface molecules, such as CD11b. Binding of exogenous or endogenous carbohydrate ligands(s) to CD66b may be important in the release of proinflammatory mediators by human eosinophils.

References

1.Yoon J, *et al.* (2007) CD66b regulates adhesion and activation of human eosinophils. J Immunol. 179 (12): 8454-62. 2.Skubitz KM, *et al.* (1996) CD6a, CD66b, CD66c, and CD66d each independently stimulate neutrophils. J Leukoc Biol. 60 (1): 106-17. 3.Skubitz KM, *et al.* (2008) Inte rdependency of CEACAM-1, -3, -6, and -8 induced human neutrophil adhesion to endothelial cells. J Transl Med. 6: 78.