Recombinant Human Mucin-1/MUC-1 Protein (Fc Tag)

Catalog No. PKSH030274

Note: Centrifuge before opening to ensure complete recovery of vial contents.

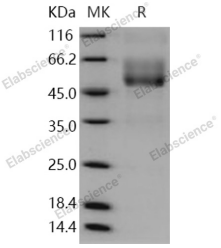
Description

Synonyms	Mucin-1;MUC-1;Breast carcinoma-associated antigen DF3;Cancer antigen 15-3;CA 15-3;Carcinoma-associated mucin;Episialin;H23AG;Krebs von den Lungen-6;KL-6;PEMT;Peanut-reactive urinary mucin;PUM;Polymorphic epithelial mucin;PEM;Tumor-associated epithelial membrane antigen;EMA;Tumor-associated mucin;CD227;MUC1;ADMCKD;ADMCKD1;CA15-3;MAM6;MCD;MCKD;MCKD1;MUC-1;MUC-1/SEC;MUC-1/X;MUC1/ZD;Mucin 1;PEM
Species	Human
Expression Host	HEK293 Cells
Sequence	Met 1-Gly 167
Accession	NP_001018016.1
Calculated Molecular Weight	42 kDa
Observed molecular weight	55-60 kDa
Tag	C-hFc
Bioactivity	Not validated for activity

Properties

Purity	> 90 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS, pH 7.4 Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 90 % as determined by reducing SDS-PAGE.

Background

Mucin 1, cell surface associated (MUC1) or polymorphic epithelial mucin (PEM) is a membrane-bound protein that is a member of the mucin family. Mucins are O-glycosylated proteins that play an essential role in forming protective mucous barriers on epithelial surfaces. These proteins also play a role in intracellular signaling. MUC-1 Exclusively located in the apical domain of the plasma membrane of highly polarized epithelial cells. After endocytosis, internalized and recycled to the cell membrane. This protein is proteolytically cleaved into alpha and beta subunits that form a heterodimeric complex. The N-terminal alpha subunit functions in cell-adhesion and the C-terminal beta subunit is involved in cell signaling. Overexpression, aberrant intracellular localization, and changes in glycosylation of this protein have been associated with carcinomas. The alpha subunit has cell adhesive properties. MUC-1 Can act both as an adhesion and an anti-adhesion protein. This protein May provide a protective layer on epithelial cells against bacterial and enzyme attack. The beta subunit contains a C-terminal domain which is involved in cell signaling, through phosphorylations and protein-protein interactions. MUC-1 participated in modulates signaling in ERK, SRC and NF-kappa-B pathways. In activated T-cells, MUC-1 influences directly or indirectly the Ras/MAPK pathway. MUC-1 Promotes tumor progression and regulates TP53-mediated transcription and determines cell fate in the genotoxic stress response. Binds, together with KLF4, the PE21 promoter element of TP53 and represses TP53 activity.

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