Data Sheet (Cat.No.TMPK-00828)

TargetMol

Mucin-1/MUC1 Protein, Human, Recombinant (Isoform Y, hFc)

General Information

Synonyms:	PEMT;Episialin;Mucin1;PUM;KL-6;MUC-1;Mucin-1;H23AG;PEM;CA 15-3;MUC1/Y;EMA;CD227;MUC1
Protein Construction:	Ser24-Gly158
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P15941-7
Molecular Weight:	41.38 kDa (predicted). Due to glycosylation, the protein migrates to 55-65 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS (pH 7.4). Typically, 8% trehalose is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 μg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

MUC1, the transmembrane glycoprotein Mucin 1, is usually found to be overexpressed in a variety of epithelial cancers playing an important role in disease progression. MUC1 isoforms such as MUC1/Y, which lacks the entire variable number of tandem repeat region, are involved in oncogenic processes by enhancing tumour initiation. MUC1/Y is therefore considered a promising target for the identification and treatment of epithelial cancers.

Reference

Khan H, et al. Development, Characterization, and In Vivo Evaluation of a Novel Aptamer (Anti-MUC1/Y) for Breast Cancer Therapy. Pharmaceutics. 2021 Aug 11;13(8):1239. doi: 10.3390/pharmaceutics13081239. PMID: 34452200; PMCID: PMC8400696.

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