

## Mucin-1/MUC1 Protein, Human (357a.a, HEK293, Fc)

Cat. No.:	HY-P78740
Synonyms:	Mucin 1; MUC1; CD227; EMA; H23AG; KL-6; MAM6; MUC-1; SEC; MUC-1; X; MUC1; ZD; PEM; PEMT; PUM; CA15-3; Episialin
Species:	Human
Source:	HEK293
Accession:	P15941 (S24-S380)
Gene ID:	4582
Molecular Weight:	Approximately 70 kDa

### PROPERTIES

Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized Human MUC1 at 1 µg/mL (100 µL/well) can bind Biotinylated Human Siglec-9. The ED <sub>50</sub> for this effect is 2.211 µg/mL.
Appearance	Lyophilized powder
Formulation	Lyophilized a 0.22 µm filtered solution of PBS, pH 7.4. Normally trehalose is added as protectant before lyophilization.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH <sub>2</sub> O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

### DESCRIPTION

Background	The Mucin-1/MUC1 protein exhibits diverse functional roles: the alpha subunit possesses cell adhesive properties and functions as both an adhesion and an anti-adhesion protein, potentially forming a protective layer on epithelial cells against bacterial and enzyme attacks. Simultaneously, the beta subunit, with its C-terminal domain, engages in cell signaling through phosphorylations and protein-protein interactions. Mucin-1/MUC1 modulates signaling in ERK, SRC, and NF-kappa-B pathways, influencing the Ras/MAPK pathway in activated T-cells. Additionally, it plays a role in promoting tumor progression, regulating TP53-mediated transcription, and determining cell fate in the genotoxic stress response. Notably, in conjunction with KLF4, Mucin-1/MUC1 binds to the PE21 promoter element of TP53, thereby repressing TP53 activity and contributing to the intricate network of cellular functions.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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