

Mucin-1/MUC1 Protein, Human (Biotinylated, HEK293, His-Avi)

Cat. No.:	HY-P78833
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 (S890-G1158)
Gene ID:	4582
Molecular Weight:	45-70 kDa

PROPERTIES

Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized Human MUC1 at 2 µg/mL on streptavidin coated plates can bind Anti-MUC1 antibody. The EC ₅₀ is 2.332-4.052 ng/mL.
Appearance	Lyophilized powder.
Formulation	Lyophilized a 0.22 µm filtered solution of PBS, 6% Trehalose, pH 7.4.
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 ₂ O.
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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