DMBT1 Protein, Human (HEK293, His)

Cat. No.:	HY-P75710
Synonyms:	Deleted in malignant brain tumors 1 protein; Glycoprotein 340; Gp-340; Hensin; SAG; DMBT1
Species:	Human
Source:	HEK293
Accession:	Q9UGM3/NP_004397.2 (T20-S220)
Gene ID:	1755
Molecular Weight:	35-45 kDa

PROPERTIES

AA Sequence	T G G W I P R T T D Y A S L I P S E V P L D P T V A E G S P F P S E S T L E S T V A E G S P I S L E S T L E S T V A E G S L I P S E S T L E S T V A E G S D S G L A L R L V N G D G R C Q G R V E I L Y R G S W G T V C D D S W D T N D A N V V C R Q L G C G W A M S A P G N A W F G Q G S G P I A L D D V R C S G H E S Y L W S C P H N G W L S H N C G H G E D A G V I C S A A Q P Q S T L R P E S W P V R I S
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized recombinant human Galectin-3 at 10 μg/mL (100 μl/well) can bind biotinylated DMBT1-His with a linear range of 0.06-1.0 μg/mL.
Appearance	Lyophilized powder
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4, 5% Trehalose, 5% Mannitol, 0.01% Tween-80 or 20 mM PB, 150 mM NaCl, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. 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	DMBT1 Protein emerges as a multifaceted candidate with potential tumor suppressor roles in brain, lung, esophageal, gastric, and colorectal cancers. Beyond its implications in cancer, DMBT1 is implicated in diverse biological processes,

serving roles in the mucosal defense system, cellular immune defense, and epithelial differentiation. It acts as an opsonin receptor for SFTPD and SPAR in macrophage tissues throughout the body, including the gastrointestinal tract's epithelial cells. Furthermore, DMBT1 plays a role in liver regeneration and is a critical factor in the fate decision and differentiation of transit-amplifying ductular (oval) cells within the hepatic lineage. Its involvement in the terminal differentiation of columnar epithelial cells during early embryogenesis is noteworthy. Additionally, DMBT1 functions as a binding protein in saliva, potentially regulating taste sensation. It binds to the HIV-1 envelope protein, displaying a dual role in both inhibiting and facilitating viral transmission. The protein exhibits a broad calcium-dependent binding spectrum against Gram-positive and Gram-negative bacteria, suggesting a significant role in defense against bacterial pathogens. DMBT1's diverse interactions, including association with the actin cytoskeleton and involvement in its remodeling during regulated exocytosis, highlight its versatile functions in cellular processes. Its pH-dependent interaction with pancreatic zymogens suggests a potential role as a Golgi cargo receptor in the regulated secretory pathway of pancreatic acinar cells, further underlining the complexity and importance of DMBT1 in various physiological contexts.

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