Data Sheet (Cat.No.TMPY-01442)

TargetMol

DMBT1 Protein, Human, Recombinant (His)

General Information

Synonyms:	GP340;deleted in malignant brain tumors 1;muclin
Protein Construction:	A DNA sequence encoding the N-terminal segment of human DMBT1 (NP_004397.2) (Met 1-Ser 220) was expressed, fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Gly 21
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9UGM3-2
Molecular Weight:	22.6 kDa (predicted); 35-45 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	1. Measured by its binding ability in a functional ELISA. 2. 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.
Purity:	> 95 % as determined by SDS-PAGE
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, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

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.

Shipping:

In general, Lyophilized powders are shipping with blue ice.

Protein Background

Deleted in malignant brain tumors 1 protein, also known as glycoprotein 34, surfactant pulmonary-associated D-binding protein, DMBT1 and GP34, is a secreted protein which belongs to theDMBT1 family. DMBT1 contains 2CUB domains, 14SRCR domains and 1ZP domain. It is highly expressed in alveolar and macrophage tissues. In some

macrophages, expression is detected on the membrane, and in other macrophages, it is strongly expressed in the phagosome/phagolysosome compartments. Defects in DMBT1 are involved in the development of glioma (GLM). Gliomas are central nervous system neoplasms derived from glial cells and comprise astrocytomas, glioblastoma multiforme, oligodendrogliomas , and ependymomas. DMBT1 may be considered as a candidate tumor suppressor for brain, lung, esophageal, gastric, and colorectal cancers. It may play roles in mucosal defense system, cellular immune defense and epithelial differentiation. DMBT1 may play a role as an opsonin receptor for SFTPD and SPAR in macrophage tissues throughout the body, including epithelial cells lining the gastrointestinal tract. It may be an important factor in fate decision and differentiation of transit-amplifying ductular (oval) cells within the hepatic lineage. DMBT1 may function as a binding protein in saliva for the regulation of taste sensation. It binds to HIV-1 envelope protein and has been shown to both inhibit and facilitate viral transmission.

Reference

Mollenhauer J.,et al.,(1997), DMBT1, a new member of the SRCR superfamily on chromosome 10q25.3-q26.1 is deleted in malignant brain tumours. Nat. Genet. 17:32-39.

Holmskov U.,et al., (1999), Cloning of gp-340, a putative opsonin receptor for lung surfactant protein D.Proc. Natl. Acad. Sci. U.S.A. 96:10794-10799.

Mollenhauer J.,et al.,(1999), The genomic structure of the DMBT1 gene: evidence for a region with susceptibility to genomic instability.Oncogene 18:6233-6240.

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