Data Sheet (Cat.No.TMPY-02012)

TargetMol

A33 Protein, Human, Recombinant (His)

General Information

Synonyms:	glycoprotein A33 (transmembrane);A33
Protein Construction:	A DNA sequence encoding the extracellular domain of human GPA33 (Q99795-1) (Met 1-Val 235) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Ile 22
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q99795-1
Molecular Weight:	25 kDa (predicted); 35-40 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. 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 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.

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

Cell surface A33 antigen, also known as glycoprotein A33, is a single-pass type I membrane protein that is expressed in the normal gastrointestinal epithelium and 95% of colon cancers. GPA33 contains one Ig-like C2-type (immunoglobulin-like) domain and one Ig-like V-type (immunoglobulin-like) domain. The open reading frame encodes a 319-amino acid polypeptide having a putative secretory signal sequence and 3 potential glycosylation sites. The predicted mature protein has a 213-amino acid extracellular region, a single transmembrane domain,

and a 62-amino acid intracellular tail. Intracellular traffic and recycling to the cell surface appear to play a major role in GPA33 function and to have an influence on its surface density superseding translational regulation. GPA33 has become a promising target of immunologic therapy strategies, but its biologic function and potential role in tumorigenesis are unknown. EpCAM protein and GPA33 mRNA expressions are specific and sensitive markers of Barrett's metaplasia (BM). GPA33 may also play a role in cell-cell recognition and signaling.Cancer ImmunotherapyImmune CheckpointImmunotherapyTargeted Therapy

Reference

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Ritter G., et al., 1997, Biochem. Biophys. Res. Commun. 236:682-6.
Frey,D. et al., 2008, Cancer Biother Radiopharm 23 (1):65-73.
Rageul,J. et al., 2009, Int J Cancer 125 (12):2802-9.