

TPBG/5T4 Protein, Human, Recombinant (His & Avi)

General Information

Synonyms:	M6P1;WAIF1;5T4;TPBG;5T4AG
Protein Construction:	Ser32-Ser355
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q13641-1
Molecular Weight:	38.2 kDa (predicted). Due to glycosylation, the protein migrates to 50-70 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	Immobilized Human TPBG, His Tag at 0.5µg/ml (100µl/Well) on the plate. Dose response curve for Anti-TPBG Antibody, hFc Tag with the EC50 of 7.3ng/ml determined by ELISA.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
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, 8% trehalose is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 µg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

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

The oncofetal tumor-associated antigen 5T4 (TBGP) has been linked with CSC properties in several different malignancies. 5T4 has functional attributes that are relevant to the spread of tumors including through EMT, CXCR4/CXCL12, Wnt, and Hippo pathways which may all contribute through the mobilization of CSCs.

Reference

Harrop R, et al. Cancer stem cell mobilization and therapeutic targeting of the 5T4 oncofetal antigen. Ther Adv Vaccines Immunother. 2019 Jan 25;7:2515135518821623. doi: 10.1177/2515135518821623. PMID: 30719508; PMCID: PMC6348545.

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481