

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

### General Information

Synonyms:	5T4;M6P1;WAIF1;5T4AG;TPBG
Protein Construction:	Ser32-Ser355
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q13641
Molecular Weight:	60-90 KDa (reducing condition)
AA Sequence:	Ser32-Ser355

### QC Testing

Biological Activity:	<ol style="list-style-type: none"><li>1. Loaded Human TPBG Antibody (5G9) (Human IgG1) on Protein-A Biosensor, can bind Biotinylated Human 5T4 (C-Avi-6His) with an affinity constant of 9.29 nM as determined in BLI assay. (Regularly tested)</li><li>2. Immobilized Human TPBG Antibody (5G9) (Human IgG1) at 2µg/ml (100 µl/well) can bind Biotinylated Human TPBG-Avi-His. The ED50 of Human Biotinylated TPBG-Avi-His is 0.13 ng/ml. (Regularly tested)</li></ol>
Purity:	Greater than 95% as determined by reducing SDS-PAGE. (QC verified)
Endotoxin:	< 0.1 ng/µg (1 EU/µg) as determined by LAL test.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4.

### 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:

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

Trophoblast glycoprotein, also known as TPBG and 5T4, it belongs to the LRR family of proteins. The C-terminus of

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LRR N-terminal cap (LRRNT) and LRR 1 are essential for the inhibition of the Wnt signaling pathway. TPBG may function as an inhibitor of Wnt/beta-catenin signaling by indirectly interacting with LRP6 and blocking Wnt3a-dependent LRP6 internalization. It expressed by all types of trophoblasts as early as 9 weeks of development. In adult tissues, the expression is limited to a few epithelial cell types but is found on a variety of carcinoma.

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