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Human TPBG(5T4) Protein; hFc Tag

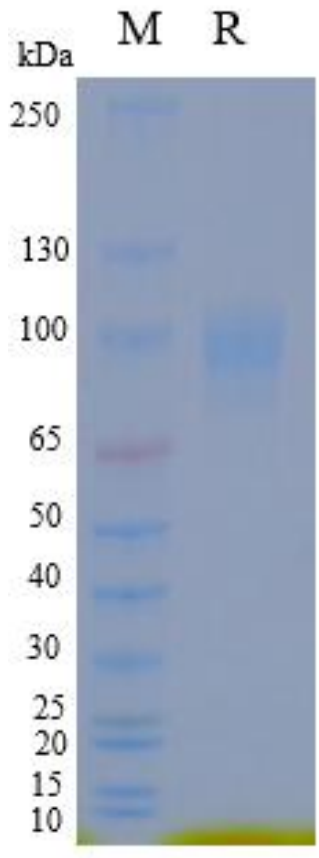
Product Information

Product Name	Human TPBG(5T4) Protein; hFc Tag
Storage temp	Store at ≤ -70℃, stable for 6 months after receipt. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.
Catalog# / Size	**GM-88811RP-100 / 100 μg** **GM-88811RP-1000 / 1 mg**

Protein Information

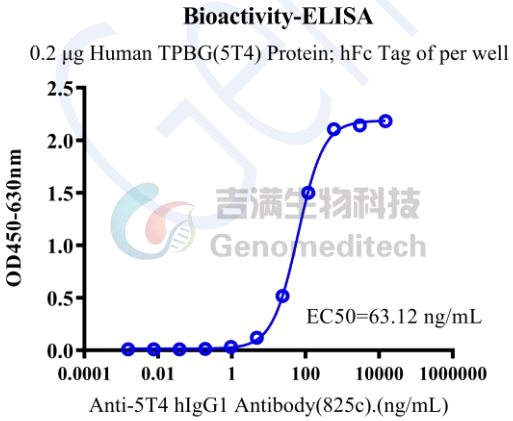
Alternative Names	Trophoblast glycoprotein, 5T4 oncofetal trophoblast glycoprotein
Source	Human TPBG(5T4) Protein; hFc Tag (GM-88811RP) is expressed from human 293 cells (HEK-293). It contains AA Ser 32 - Ser 355 (Accession # Q13641-1). This protein carries a hFc tag at the C-terminus.
Purity	> 95% as determined by SDS-PAGE
Endotoxin	< 1 EU/μg, determined by LAL gel clotting assay
Predicted Mol Mass	61.3 kDa
Formulation	Supplied as a 0.2 μm filtered solution of PBS, pH7.2-7.4.
Description	TPBG, full name Trophoblast Glycoprotein, also known as 5T4, is a transmembrane glycoprotein rich in leucine-rich repeats and belongs to the family of oncofetal antigens. In normal physiological conditions, TPBG is expressed in trophoblast cells during embryonic development, where it participates in cell migration, adhesion, and morphogenesis. However, its expression is extremely low or absent in most adult normal tissues. Currently, multiple TPBG-targeted therapeutic strategies are under active development, including various antibody-drug conjugates (ADCs), bispecific antibodies, and chimeric antigen receptor T-cell (CAR-T) therapies. Among them, several ADC candidates (e.g., NBE-002) have demonstrated antitumor activity against TPBG-positive solid tumors in early-phase clinical trials. In summary, TPBG (5T4) protein plays a critical role in tumor initiation, progression, and metastasis. Its unique tumor-restricted expression profile makes it a highly promising broad-spectrum antitumor target. In-depth elucidation of the molecular mechanisms of TPBG and the development of efficient targeted therapeutics hold significant scientific and clinical value for expanding immunotherapeutic and precision medicine strategies, as well as for improving outcomes in patients with refractory solid tumors.

SDS-PAGE



On SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity-ELISA



Human TPBG(5T4) Protein; hFc Tag (Catalog # GM-88811RP) was immobilized at 2 μg/ml (100 μL/well). Increasing concentrations of Anti-5T4 hIgG1 Antibody (825c) (Catalog # GM-52191AB) were added.