Data Sheet (Cat.No.TMPY-04853)

TargetMol

TSHR Protein, Human, Recombinant (His)

General Information

Synonyms:	TSHR;hTSHR-I;TSH Receptor;LGR3;CHNG1
Protein Construction:	A DNA sequence encoding the human TSHR (NP_000360.2) (Gly21-Gly413) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Gly
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	P16473
Molecular Weight:	46.1 kDa (predicted); 56.6 kDa (reducing conditions)

QC Testing

Biological Activity:	Label Recombinant Human TSH alpha & beta Heterodimer Protein (His Tag) with biotin. Immobilized Recombinant Human TSH Receptor/TSHR (His Tag) (Cat#TMPY-04853) at 2 μg/ml (100 μl/well) can bind biotinylated Recombinant Human TSH alpha & beta Heterodimer Protein, the EC50 is 150-450 ng/mL.
Purity:	> 85 % 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 50 mM Tris, 150 mM NaCl, 10% Glycerol, 1 mM TCEP, pH 7.5. 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:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

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

Thyroid-stimulating hormone (TSH) is secreted by the pituitary gland and promotes thyroid growth and function, with increased TSH levels typically associated with hypothyroidism. Immunohistochemical analysis revealed predominantly nuclei/peri-nuclei localization of TSHR in cancerous tissues but cell membrane localization in non-

cancerous parts. Overexpression of TSHR was found in a great majority of HCC tissues and associated with unfavorable prognosis.

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