Human TSHR Full Length Protein (VLP)

Catalog # TSR-H52P3

Synonym

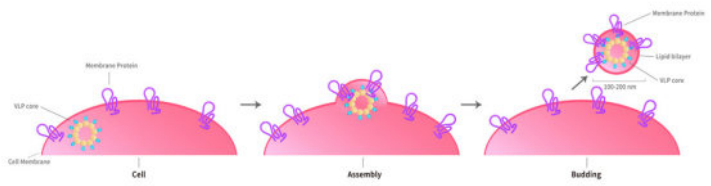
TSHR,TSH-R,LGR3,TSH R

Source

Human TSHR Full Length Protein (VLP)(TSR-H52P3) is expressed from human 293 cells (HEK293). It contains AA Gly 21 - Leu 764 (Accession # P16473). Predicted N-terminus: Asp

Molecular Characterization

Virus-like particles(VLPs) are formed by self-assembly of envelop/capsid proteins from viruses. Membrane Proteins can be constituted in-situ with VLPs produced from HEK293 cell cultures. These VLPs concentrate conformationally intact membrane proteins directly on the cell surface and produce soluble, high-concentration proteins perfect for immunization and antibody screening.



The VLPs provide the display of properly folded membrane proteins in their native cellular membrane in a compact size of 100~300 nm diameter (similar to the size of most viruses) making it optimal targets for dendritic cells in vivo and surface attachment for phage display.

Formulation

The VLPs are highly immunogenic, so the immunization strategy should be optimized (antigen dose, regimen and adjuvant).

Supplied as 0.2 μm filtered solution in PBS, 0.2 M Arginine, pH7.4 with trehalose as protectant.

Contact us for customized product form or formulation.

Shipping

This product is supplied and shipped with dry ice, please inquire the shipping cost.

Storage

Please avoid repeated freeze-thaw cycles.

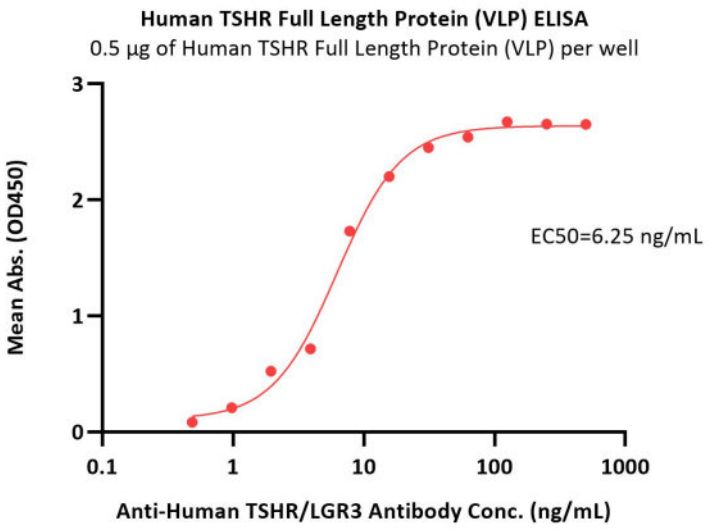
This product is stable after storage at:

- The product MUST be stored at -70°C or lower upon receipt;
- -70°C for 12 months under sterile conditions.

Endotoxin

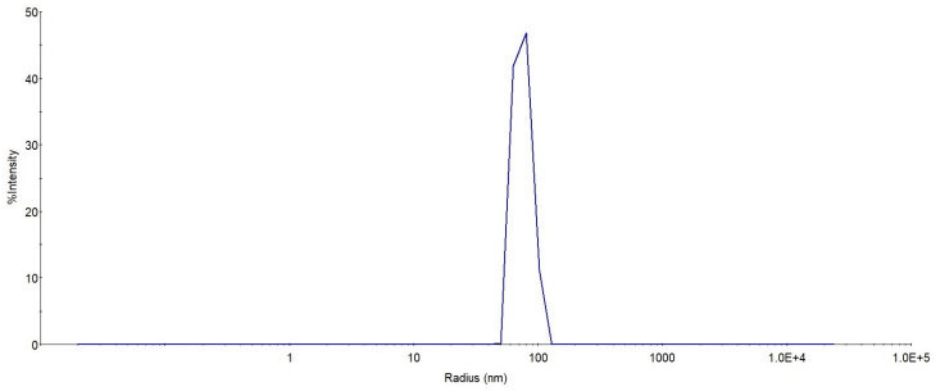
Less than 1.0 EU per μg by the LAL method.
*The isotype control of empty/mock VLP (Cat. No. VLP-N5213) is sold separately and not included in protein, you can follow this link for product information.

Bioactivity-ELISA



Immobilized Human TSHR Full Length Protein (VLP) (Cat. No. TSR-H52P3) at 5 μg/mL (100 μL/well) can bind Anti-Human TSHR/LGR3 Antibody with a linear range of 0.5-16 ng/mL (QC tested).

Identity-DLS



The mean peak Radius of VLP is 70-90 nm with more than 95% intensity as determined by dynamic light scattering (DLS).

Background

Thyroid-stimulating hormone receptor (TSHR) is also known as Thyrotropin receptor and LGR3. TSHR is glycosylated receptor for the thyroid-stimulating hormone (TSH) or thyrotropin. Also acts as a receptor for the heterodimeric glycoprotein hormone (GPHA2:GPHB5) or thyrostimulin. The activity of this receptor is mediated by G proteins which activate adenylate cyclase. Plays a central role in controlling thyroid cell metabolism.

Clinical and Translational Updates