

Datasheet for ABIN7491755

TSH receptor Protein**2** Images[Go to Product page](#)

Overview

Quantity:	100 µg
Target:	TSH receptor (TSHR)
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Synthetic Nanodisc

Product Details

Purpose:	Human TSHR full length protein-synthetic nanodisc
Characteristics:	Unlike other membrane scaffold protein (MSP) Nanodisc on the market, our synthetic Nanodisc can be prepared directly from the cells. The polymers used during this process have a dual function. It dissolves the cell membranes, like the detergent, and uses cellular phospholipids to form Nanodisc around the membrane proteins. The target protein embedded Nanodiscs can then be purified.

Target Details

Target:	TSH receptor (TSHR)
Alternative Name:	TSHR (TSHR Products)
Background:	The protein is a membrane protein and a major controller of thyroid cell metabolism. The encoded protein is a receptor for thyrotropin and thyrostimulin, and its activity is mediated by adenylate cyclase. Defects in this gene are a cause of several types of hyperthyroidism.
Molecular Weight:	The human full length TSHR protein has a MW of 86.8 kDa

Target Details

UniProt: [P16473](#)

Pathways: [Thyroid Hormone Synthesis](#)

Application Details

Comment: Advantages of Synthetic Nanodiscs:

- Highly purified membrane proteins
- High solubility in aqueous solutions
- High stability
- Proteins are in a native membrane environment and remain biologically active
- No detergent and can be used for cell-based assays
- No MSP backbone proteins

Limitations of Synthetic Nanodiscs:

- Intolerant to acids and high concentrations of divalent metal ions

Restrictions: For Research Use only

Handling

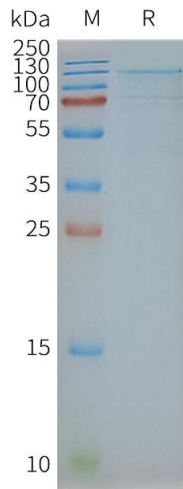
Format: Lyophilized

Buffer: Lyophilized from nanodisc solubilization buffer (20 mM Tris-HCl, 150 mM NaCl, pH 8.0).
Normally 5 % - 8 % trehalose is added as protectants before lyophilization.

Storage: -20 °C, -80 °C

Storage Comment: Store at -20°C to -80°C for 12 months in lyophilized form. After reconstitution, if not intended for use within a month, aliquot and store at -80°C (Avoid repeated freezing and thawing).
Lyophilized proteins are shipped at ambient temperature.

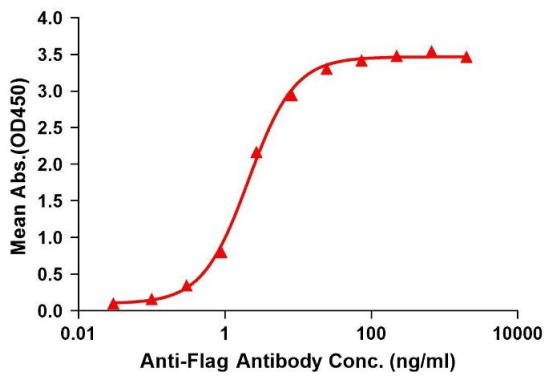
Expiry Date: 12 months



SDS-PAGE

Image 1. Human TSHR-Nanodisc, Flag Tag on SDS-PAGE

ELISA assay to evaluate TSHR-Nanodisc
0.2µg Human TSHR-Nanodisc per well



ELISA

Image 2. Elisa plates were pre-coated with Flag Tag TSHR-Nanodisc (0.2 µg/per well). Serial diluted anti-Flag monoclonal antibody solutions were added, washed, and incubated with secondary antibody before Elisa reading. From above data, the EC50 for anti-Flag monoclonal antibody binding with TSHR-Nanodisc is 2.108 ng/mL.