

## MULTISCREEN™ STABLE CELL LINE RAT RECOMBINANT TSH RECEPTOR

### Data sheet

#### PRODUCT INFORMATION

**Catalog Number:** C1177-1

**Lot Number:** C1177-1-073005

**Quantity:** 1 vial ( $2 \times 10^6$ ) frozen cells

**Freeze Medium:** Sigma Freezing Medium (C-6164)

**Host cell:** HEK293T

**Transfection:** Full-length Rat Tshr cDNA (GenBank Accession Number NM\_012888.1)

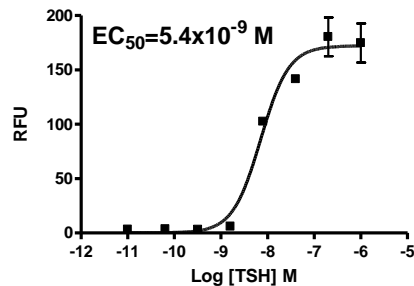
**Recommended Storage:** Liquid nitrogen upon receiving

**Propagation Medium:** DMEM, 10% FBS, 100 $\mu$ g/mL zeocin

**Stability:** Stable after minimum of two months continuous growth

**Background:** The thyroid stimulating hormone receptor (TSHR) is expressed in the membrane of thyroid follicular cells. It is involved in regulating thyrocyte cell growth and function. TSHR is also the target autoantigen in thyroid autoimmune diseases. Autoantibodies to TSHR that act as agonists are responsible for the hyperthyroidism of Graves' Disease. Another class of autoantibodies that block the binding of TSH to TSHR may mediate the hypothyroidism associated with Hashimoto's thyroiditis, primary myxoedema, and neonatal hypothyroidism.

**Application:** Functional assays



**Figure legend:** Dose-dependent stimulation of intercellular calcium flux upon treatment with ligand, measured with Multiscreen™ Calcium 1.0 No Wash Assay Kit (Multispan MSCA01).

#### References:

Morgenthaler *et al.* (1999) Direct binding of thyrotropin receptor autoantibody to in vitro translated thyrotropin receptor: a comparison to radioreceptor assay and thyroid stimulating bioassay. *Thyroid* 9:466-475.

Davies *et al.* (2005) Thyrotropin receptor-associated diseases: from adenomata to Graves disease. *J Clin Invest* 115:1972-1983.

Ando, T and Davies TF (2005) Monoclonal antibodies to the thyrotropin receptor. *Clin Dev Immunol* 12:137-43.

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