I. Introduction

Catalog Number: M00202
Cell Line Name: CHO-K1/TRH1
Gene Synonyms: MGC141920; TRHR
Expressed Gene: Genbank Accession Number NM_003301; no expressed tags
Host Cell: CHO-K1
Quantity: 2 vial (3x10^6 per vial) frozen cells
Stability: 16 passages
Application: Functional assay for TRH1 receptor
Freeze Medium: 45% culture medium, 45% FBS, and 10% DMSO
Complete Culture Medium: Ham’s F12, 10% FBS
Culture Medium: Ham’s F12, 10% FBS, 400 µg/ml G418
Mycoplasma Status: Negative
Storage Recommendation: Liquid nitrogen immediately upon delivery

II. Background

Thyrotropin-releasing hormone receptor1 (TRH1) is a member of G-protein coupled receptor family A. This protein is a receptor for Thyrotropin-releasing hormone (TRH). Human TRH1 is expressed in lymphocytes, pituitary gland and CNS. It can stimulate the releasing of prolactin (PRL), thyrotropin (TSH). TRH1 receptor knockout mice exhibit a slightly reduced growth rate, considerable decrease in serum T_3, T_4, and prolactin levels but no alteration of thyroid-stimulating hormone levels.
III. Representative Data

![Graph showing intracellular calcium response from CHO-K1/TCR1 and CHO-K1 cells.](image)

**Figure.** Intracellular calcium response from CHO-K1 cells stably expressing human Thyrotropin-releasing hormone receptor and from untransfected control cells. Cells were loaded with Calcium-4 then stimulated with the indicated concentrations of Thyrotropin-releasing hormone. Calcium responses were recorded on a FlexStation plate reader. Data represent the average +/- standard deviation of triplicate determinations.

IV. Thawing and Subculturing

**Thawing:** Protocol
1. Remove the vial from liquid nitrogen tank and thaw cells quickly in a 37°C water-bath.
2. Just before the cells are completely thawed, decontaminate the outside of the vial with 70% ethanol and transfer the cells to a 15 ml centrifuge tube containing 9 ml of complete growth medium.
3. Pellet cells by centrifugation at 200 x g force for 5 min, and discard the medium.
4. Resuspend the cells in complete growth medium.
5. Add 2 ml of the cell suspension per well in a 6 well-plate.
6. Add G418 to a concentration of 400 μg/ml the following day.

**Subculturing:** Protocol
1. Remove and discard culture medium.
2. Wash cells with PBS (pH=7.4) to remove all traces of serum that contains trypsin inhibitor.
3. Add 2.0 ml of 0.05% (w/v) Trypsin- EDTA (GIBCO, Cat No. 25300) solution to 10 cm dish and observe the cells under an inverted microscope until cell layer is dispersed (usually within 3 to 5 minutes).
   Note: To avoid clumping, do not agitate the cells by hitting or shaking the dish while waiting for the cells to detach. Cells that are difficult to detach may be placed at 37°C to facilitate dispersal.
4. Add 6.0 to 8.0 ml of complete growth medium and aspirate cells by gently pipetting, centrifuge the cells 200 x g force for 5min, and discard the medium.
5. Resuspend the cells in complete growth medium with G418 and add appropriate aliquots of the cell suspension to new culture vessels.
6. Incubate cultures at 37°C.
Subcultivation Ratio: 1:3 to 1:8 weekly.
Medium Renewal: Every 2 to 3 days

V. References

GenScript USA Inc.
120 Centennial Ave., Piscataway, NJ 08854
Tel: 732-885-9188, 732-885-9688
Fax: 732-210-0262, 732-885-5878
Email: info@genscript.com
Web: [http://www.genscript.com](http://www.genscript.com)

For Research Use Only.
Limited Use License Agreement

This is a legal agreement between you (Licensee) and GenScript USA Inc. governing use of GenScript's stable cell line products and protocols provided to licensee. By purchasing and using the stable cell line, the buyer agrees to comply with the following terms and conditions of this label license and recognizes and agrees to such restrictions:

1) The products are not transferable and will be used at the site where they were purchased. Transfer to another site owned by buyer will be permitted only upon written request by buyer followed by subsequent written approval by GenScript.

2) The purchaser cannot sell or otherwise transfer (a) this product (b) its components or (c) materials made using this product or its components to a third party.

3) The products sold by GenScript are for laboratory and animal research purposes only. The products are not to be used on humans, for consumption, or for any unlawful uses.

GenScript USA Inc. will not assert against the buyer a claim of infringement of patents owned or controlled by GenScript USA Inc. and claiming this product based upon the manufacture, use or sale of a clinical diagnostic, therapeutic and vaccine, or prophylactic product developed in research by the buyer in which this product or its components has been employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on the use of this product for other purposes, contact Marketing Department, GenScript USA Inc., 120 Centennial Avenue, Piscataway, New Jersey 08840, U.S.A. Phone: 1-732-885-9188. Fax: 1-732-210-0262. Email: marketing@genscript.com.