

## MULTISCREEN™ STABLE CELL LINE RAT RECOMBINANT TRKA RECEPTOR

### Data sheet

#### PRODUCT INFORMATION

**Catalog Number:** CKr1001-1

**Lot Number:** CKr1001-1-020515

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

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

**Host cell:** CHO-K1

**Transfection:** Expression vector containing full-length rat NTRK1 cDNA (GenBank Accession Number NM\_001012331) and vector pGL4.30[luc2P/NFAT-RE/Hygro] (GenBank Accession Number DQ904462)

**Recommended Storage:** Liquid nitrogen upon receiving

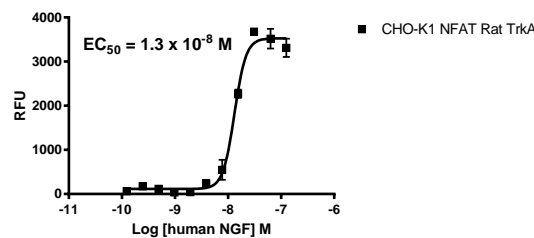
**Propagation Medium:** DMEM/F12, 10% FBS, 400  $\mu\text{g}/\text{mL}$  G418; 250  $\mu\text{g}/\text{mL}$  hygromycin

**Stability:** In progress

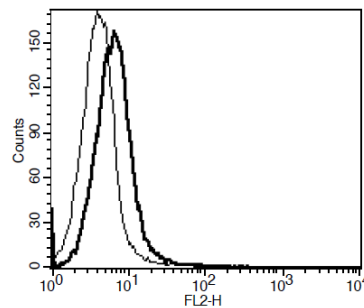
**Background:** Neurotrophic tyrosine kinase receptor type 1 (also called NTRK1; MTC; p140-TrkA; TRK; Trk-A; TRK1; TRKA) is a member of the neurotrophic tyrosine kinase receptor family. NTRK1 is a membrane bound receptor that phosphorylates itself and members of the MAPK pathway upon neurotrophin binding. Genetic variations in NTRK1 have been linked to anhidrosis, congenital insensitivity to pain, cancer, and mental retardation.

**Application:** Functional assay

**Figure 1**



**Figure 2**



**Figure 1.** Dose-dependent calcium flux upon treatment with ligand, monitored with FLIPR. **Figure 2.** Receptor expression on cell surface measured by flow cytometry (FACS) using an anti-NTRK1 antibody. Thin line: parental cells; thick line: receptor-expressing cells.

#### References:

Bradshaw, R.A. et al. "Receptor Tyrosine Kinase Signaling Mechanisms: Devolving TrkA Responses with Phosphoproteomics." *Advances in biological regulation* 53.1 (2013): 87–96. *PMC*. Web. 4 Feb. 2015.

Mardy, S et al. "Congenital Insensitivity to Pain with Anhidrosis: Novel Mutations in the TRKA (NTRK1) Gene Encoding a High-Affinity Receptor for Nerve Growth Factor." *American Journal of Human Genetics* 64.6 (1999): 1570–1579. Print.

Marlin, M. Caleb, and Guangpu Li. "Biogenesis and Function of the NGF/TrkA Signaling Endosome." *International review of cell and molecular biology* 314 (2015): 239–257. *PMC*. Web. 4 Feb. 2015.

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