

MULTISCREEN™ STABLE CELL LINE
HUMAN RECOMBINANT MGLUR3 RECEPTOR

Data sheet

PRODUCT INFORMATION

Catalog Number: CG1190

Lot Number: CG1190-111409

Quantity: 1 vial (2×10^6) frozen cells

Freeze Medium: Sigma Freezing Medium (C-6164)

Host cell: HEK293T Gαq5

Transfection: Expression vector containing full-length human GRM3 cDNA (GenBank Accession Number NM_000840) with FLAG tag sequence at N-terminus

Recommended Storage: Liquid nitrogen upon receiving

Propagation Medium: DMEM with GlutaMAX (Gibco 10566), 10% FBS (dialyzed), 2 mM sodium pyruvate, 250 µg/mL hygromycin, 1 µg/mL puromycin

Stability: Stable after two months continuous growth

Background: Metabotropic glutamate receptor mGluR3 is a G protein-coupled receptor for glutamate. Glutamate is the major excitatory neurotransmitter in the mammalian central nervous system and functions to regulate excitability via pre- and postsynaptic mechanisms. The mGluR3 receptor is widely expressed in glial cells but also shows discrete localization both pre- and postsynaptic on glutamatergic and other neurotransmitter synapses. It is also expressed within forebrain regions including hippocampus and thalamus. Agonists of mGluR3 have been shown to suppress enhanced glutamatergic excitations in brain synapses known to be involved in the expression of fear/anxiety in animals and humans. It is anticipated that mGluR3 receptor represent a promising new target for treatment of anxiety and stress-related disorders in humans.

Application: Functional assays

Figure 1

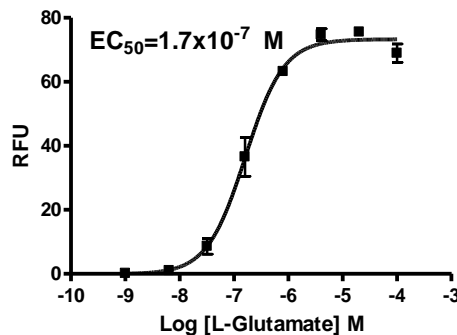


Figure 2

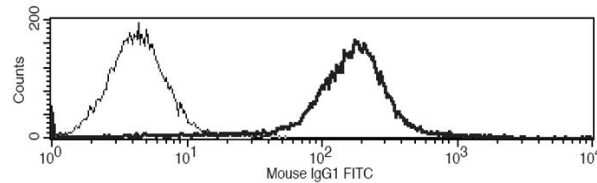


Figure 1. Dose-dependent calcium flux upon treatment with ligand, monitored with FlexStation. **Figure 2.** Receptor expression on cell surface measured by flow cytometry (FACS) using an anti-FLAG antibody. Thin line: parental cells; thick line: receptor-expressing cells.

References:

Schoepp *et al.* (2003) LY354740, an mGlu2/3 receptor agonist as a novel approach to treat anxiety/stress. *Stress* 6:189-197.

Swanson *et al.* (2005) Metabotropic glutamate receptors as novel targets for anxiety and stress disorders. *Nat Rev Drug Discov* 4:131-144.

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www.multispaninc.com
sales@multispaninc.com
support@multispaninc.com

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Phone: +1 (510) 887-0817
Fax: +1 (510) 887-0863
26219 Eden Landing Road
Hayward, CA 94545-3718
U.S.A.