

**MULTISCREEN™ MEMBRANE
HUMAN RECOMBINANT MGLUR3 RECEPTOR**

Data sheet

PRODUCT INFORMATION

Catalog Number: MCG1190

Lot Number: MCG1190-03052012

Quantity: 1 vial (15.6mg/ml, 1mg) membrane

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

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:
Radioligand Binding Assay**

Figure 1

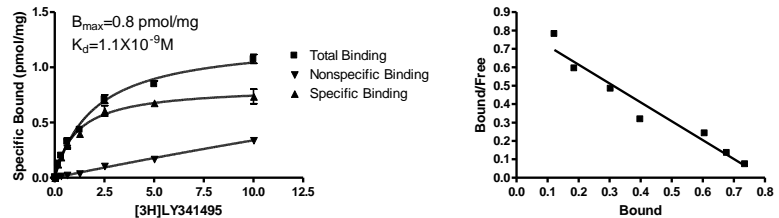


Figure 3

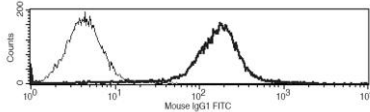


Figure 2

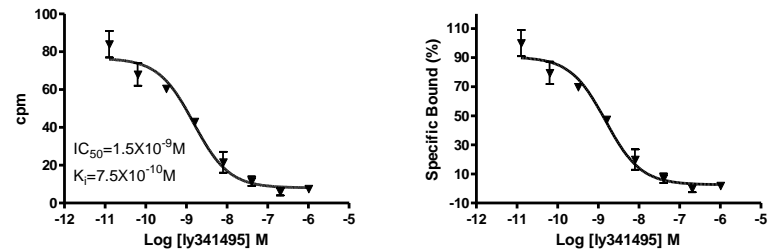


Figure 1. Saturation binding assay curve: Specific binding obtained with mGluR3 membrane with [³H]LY341495. Scatchard plot showing one binding site. **Figure 2. Competition binding assay curve:** Dose dependent competition of LY341495 for [³H]LY341495 1nM. **Figure 3.** Receptor expression on cell surface 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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