Recombinant Human mGluR7

Catalog Number: 9530-UR

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived Arg33 & Gln35-Ser521, with a C-terminal 6-His tag Accession # Q14831-1
N-terminal Sequence Analysis	Arg33; Gln35 inferred from enzymatic pyroglutamate treatment revealing Glu36
Structure / Form	Disulfide-linked homodimer
Predicted Molecular Mass	55 kDa

SPECIFICATIONS

SDS-PAGE	55-68 kDa, reducing conditions
Activity	Bioassay data are not available.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA

Bioactivity not tested

The Innovator Series. R&D Systems proteins are almost always sold with a bioassay to indicate activity. However, we recognize that sometimes proteins might be novel, and their bioactivity may not be well understood. In addition, some researchers may wish to use polypeptides to make antibodies. To facilitate the advancement of new science, we now offer our Innovator Series of proteins.

BACKGROUND

Metabotropic glutamate receptors (mGluRs) are members of the G-protein-coupled receptor (GPCR) superfamily, modulating glutamate neurotransmission in the central and peripheral nervous systems through GTP-binding proteins (1). Structurally, members of this family are characterized by a large N-terminal extracellular domain (ECD), seven transmembrane domains, and a cytoplasmic C-terminal domain that is variable in length. Two ECDs dimerize together and large conformational changes are induced when agonists bind to one or both domains (2). The C-terminal region is subject to alternative splicing, regulated by phosphorylation, and interacts directly with a G-protein to modulate protein-protein interactions (2, 3). The receptors are subdivided into three groups (I–III) based on sequence homology, signal transduction and pharmacological properties (1, 2). The Group III receptors include mGLuRs 4, 6, 7 and 8 (2). Mature human mGluR8 is 875 amino acids in length, including a 550 amino acid (aa) N-terminal ECD (4). Within N-terminal ECD, human mGluR8 shares 98.4% and 98.5% aa sequence identity with mouse and rat mGluR8, respectively.

References:

1. Conn P.J. and J.P. Pin (1997) Annu. Rev. Pharmacol. Toxicol. **37**:205.
2. Niswender C.M. and P.J. Conn (2010) Annu. Rev. Pharmacol. Toxicol. **50**:295.
3. Pin J.P. and Duvoisin R. (1995) Neuropharmacology. **34**:1.
4. Makoff A. *et al.* (1996) Brain Res. Mol. Brain. Res. **40**:165.

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