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Datasheet for ABIN7538304

Metabotropic Glutamate Receptor 5 Protein

Overview

Quantity:	50 µg
Target:	Metabotropic Glutamate Receptor 5 (GRM5)
Origin:	Human
Source:	Mammalian Cells
Protein Type:	Synthetic Nanodisc

Product Details

Purpose:	Human GRM5 full length protein-synthetic nanodisc
Characteristics:	Unlike other membrane scaffold protein (MSP) Nanodisc on the market, our synthetic Nanodisc can be prepared directly from the cells. The polymers used during this process have a dual function. It dissolves the cell membranes, like the detergent, and uses cellular phospholipids to form Nanodisc around the membrane proteins. The target protein embedded Nanodiscs can then be purified.

Target Details

Target:	Metabotropic Glutamate Receptor 5 (GRM5)
Alternative Name:	GRM5 (GRM5 Products)
Background:	This gene encodes a member of the G-protein coupled receptor 3 protein family. The encoded protein is a metabotropic glutamate receptor, whose signaling activates a phosphatidylinositol-calcium second messenger system. This protein may be involved in the regulation of neural network activity and synaptic plasticity. Glutamatergic neurotransmission is involved in most aspects of normal brain function and can be perturbed in many neuropathologic conditions. A

Target Details

pseudogene of this gene has been defined on chromosome 11. Alternative splicing results in multiple transcript variants. [provided by RefSeq, May 2014]

Molecular Weight: The human full length GRM5 protein has a MW of 132.5kDa

UniProt: [P41594](#)

Pathways: [Regulation of G-Protein Coupled Receptor Protein Signaling](#), [Regulation of long-term Neuronal Synaptic Plasticity](#)

Application Details

Comment: Advantages of Synthetic Nanodiscs:

- Highly purified membrane proteins
- High solubility in aqueous solutions
- High stability
- Proteins are in a native membrane environment and remain biologically active
- No detergent and can be used for cell-based assays
- No MSP backbone proteins

Limitations of Synthetic Nanodiscs:

- Intolerant to acids and high concentrations of divalent metal ions

Restrictions: For Research Use only

Handling

Format: Lyophilized

Buffer: Lyophilized from nanodisc solubilization buffer (20 mM Tris-HCl, 150 mM NaCl, pH 8.0). Normally 5 % - 8 % trehalose is added as protectants before lyophilization.

Storage: -20 °C,-80 °C

Storage Comment: Store at -20°C to -80°C for 12 months in lyophilized form. After reconstitution, if not intended for use within a month, aliquot and store at -80°C (Avoid repeated freezing and thawing). Lyophilized proteins are shipped at ambient temperature.

Expiry Date: 12 months