Datasheet for ABIN7538382

MC1 Receptor Protein

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Overview

Quantity:	50 µg
Target:	MC1 Receptor (MC1R)
Origin:	Human
Source:	Mammalian Cells
Protein Type:	Synthetic Nanodisc

Product Details

Purpose:	Human MSHR 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:	MC1 Receptor (MC1R)
Alternative Name:	MSHR (MC1R Products)
Background:	This intronless gene encodes the receptor protein for melanocyte-stimulating hormone (MSH). The encoded protein, a seven pass transmembrane G protein coupled receptor, controls melanogenesis. Two types of melanin exist: red pheomelanin and black eumelanin. Gene mutations that lead to a loss in function are associated with increased pheomelanin production, which leads to lighter skin and hair color. Eumelanin is photoprotective but pheomelanin may

Target Details

	contribute to UV-induced skin damage by generating free radicals upon UV radiation. Binding of MSH to its receptor activates the receptor and stimulates eumelanin synthesis. This receptor is a major determining factor in sun sensitivity and is a genetic risk factor for melanoma and non-melanoma skin cancer. Over 30 variant alleles have been identified which correlate with skin and hair color, providing evidence that this gene is an important component in determining normal human pigment variation. [provided by RefSeq, Jul 2008]
Molecular Weight:	The human full length MSHR protein has a MW of 34.7kDa
UniProt:	Q01726
Pathways:	cAMP Metabolic Process, Feeding Behaviour

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