PRODUCT INFORMATION

Tag	C-Flag&Strep Tag
Target	MC1R
Synonyms	CMM5; MSH-R; SHEP2
Description	Human MC1R-Strep full length protein-synthetic nanodisc
Delivery	In Stock
Uniprot ID	Q01726
Expression Host	HEK293
Protein Families	Druggable Genome, GPCR, Transmembrane
Protein Pathways	Melanogenesis, Neuroactive ligand-receptor interaction
Molecular Weight	The human full length MC1R-strep protein has a MW of 34.7 kDa
Formulation & Reconstitution	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. Please see Certificate of Analysis for specific instructions. Do not use solvents with a pH below 6.5 or those containing high concentrations of divalent metal ions (greater than 5 mM) in subsequent experiments.
Storage&Shipping	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.
Sterility	Products are supplied non-sterile. For cell culture applications, dilute in appropriate medium and sterile-filter (0.22 μm) prior to use.
Background	The receptor protein for melanocyte-stimulating hormone (MSH). The 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 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.
Usage	Research use only
Conjugate	Unconjugated

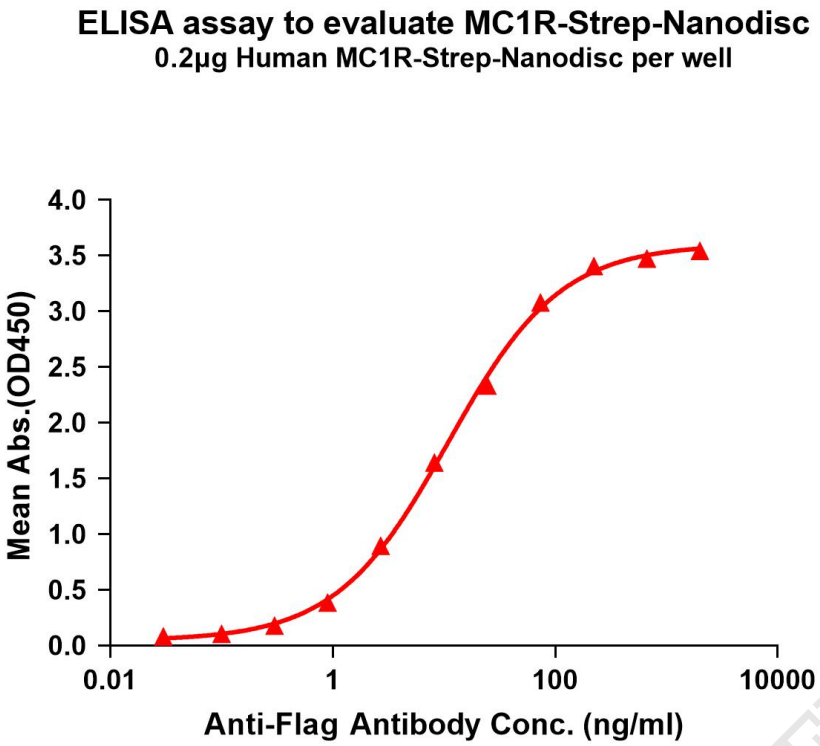

Figure 1. Elisa plates were pre-coated with C-Flag&Strep Tag MC1R-Strep-Nanodisc (0.2μg/per well). Serial diluted anti-Flag monoclonal antibody solutions were added, washed, and incubated with secondary antibody before Elisa reading. From above data, the EC50 for anti-Flag monoclonal antibody binding with MC1R-Strep-nanodisc is 10.92ng/ml.

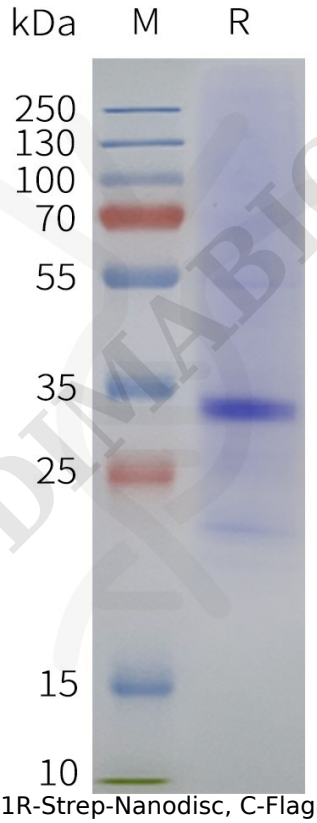

Figure 2. Human MC1R-Strep-Nanodisc, C-Flag&Strep Tag on SDS-PAGE