PRODUCT INFORMATION

Tag	C-Flag&Strep Tag
Target	OPN4
Synonyms	MOP
Description	Human OPN4-Strep full length protein-synthetic nanodisc
Delivery	In Stock
Uniprot ID	Q9UHM6
Expression Host	HEK293
Protein Families	Druggable Genome, GPCR, Transmembrane
Protein Pathways	N/A
Molecular Weight	The human full length OPN4-Strep protein has a MW of 52.6 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	Opsins are members of the guanine nucleotide-binding protein (G protein)-coupled receptor superfamily. A photoreceptive opsin protein that is expressed within the ganglion and amacrine cell layers of the retina. In mouse, retinal ganglion cell axons expressing this gene projected to the suprachiasmatic nucleus and other brain nuclei involved in circadian photoentrainment. In mouse, this protein is coupled to a transient receptor potential (TRP) ion channel through a G protein signaling pathway and produces a physiologic light response via membrane depolarization and increased intracellular calcium. The protein functions as a sensory photopigment and may also have photoisomerase activity. Experiments with knockout mice indicate that this gene attenuates, but does not abolish, photoentrainment.
Usage	Research use only
Conjugate	Unconjugated

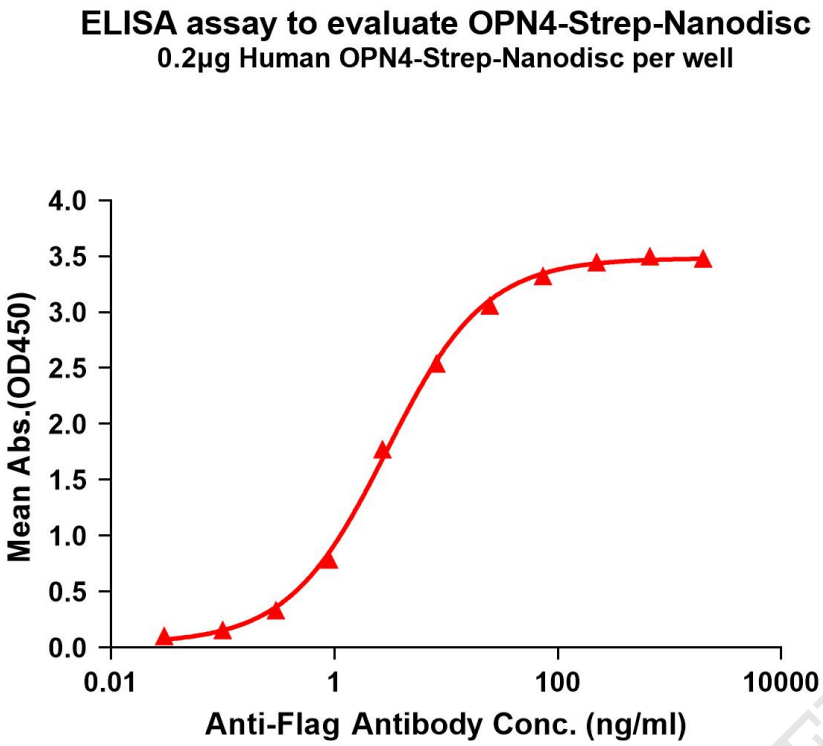

Figure 1. Elisa plates were pre-coated with C-Flag&Strep Tag OPN4-Strep-Nanodisc (0.2μg/per well). Serial diluted anti-Flag monoclonal antibody solutions were added, washed, and incubated with secondary antibody before Elisa reading. From above data, the EC50 for anti-Flag monoclonal antibody binding with OPN4-Strep-nanodisc is 2.944ng/ml.

Figure 2. Human OPN4-Strep-Nanodisc, C-Flag&Strep Tag on SDS-PAGE