Biotinylated Human CNR1 Full Length Protein, Flag Tag&His,Avitag™ (Nanodisc)

Catalog # CN1-H85D4

Application

- Cell based assay (FACS or functional assay)
- Affinity testing (SPR / BLI)
- Screening (ELISA)

Synonyms

CNR1, cannabinoid receptor 1, CANN6, CB-R, CB1, CB1A, CB1K5, CB1R, CNR

Source

Nanodisc Biotinylated Human CNR1 Full Length Protein, Flag Tag&His,Avitag (CN1-H85D4) is expressed from Baculovirus-Insect cells. It contains AA Gly 99 - Ala 301 & Asp 333 - Ser 414 (Accession # P21554-1).

Predicted N-terminus: Asp

Molecular Characterization



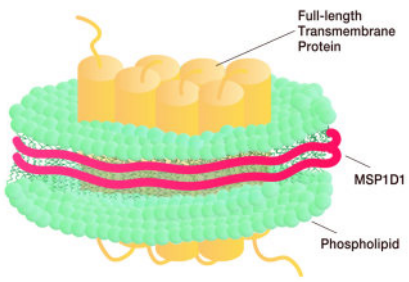
This protein carries a Flag tag at the N-terminus and a polyhistidine tag at the C-terminus followed by an Avi tag (Avitag™).

The protein has a calculated MW of 60.3 kDa. The protein migrates as 25 kDa and 43-45 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.

Within the expressed region, several mutations were introduced to optimize the protein expression and stability.

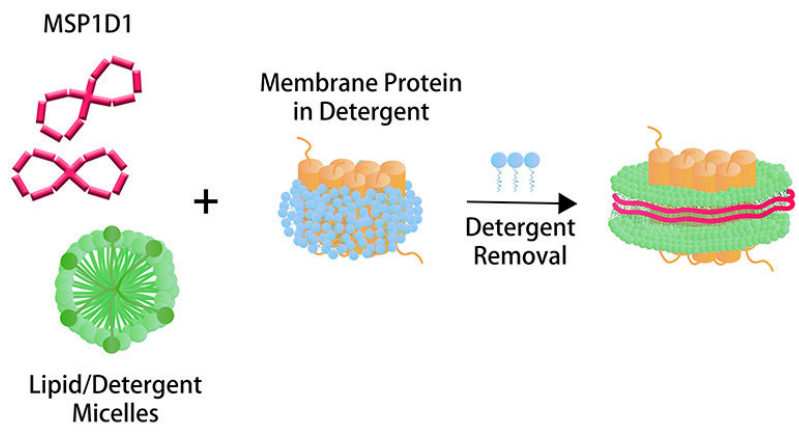
*The isotype control of empty/mock nanodisc (Cat. No. APO-H81Q5) is sold separately and not included in protein, you can follow the link for product information.

- **Structure**



Nanodisc membrane protein is wrapped by a synthetic phospholipid bilayer membrane structure, composed of membrane scaffold proteins (MSPs) and phospholipids.

- **Synthesis Process**



Nanodisc reconstitution is a self-assembly process that **starts from purified, detergent-solubilized membrane proteins** and reconstitutes them into synthetic phospholipid bilayers stabilized by MSP1D1 membrane scaffold protein. This creates a stable, detergent-free environment that preserves native conformation and biological activity, with excellent homogeneity and full compatibility with **cell-based assays such as FACS** and binding assays in antibody discovery and screening (ELISA),etc.

Labeling

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Protein Ratio

0.7-1.0 as determined by the SABA assay / HABA assay / binding ELISA.

Endotoxin

Less than 1.0 EU per μg by the LAL method / rFC method.

Purity

>90% as determined by SDS-PAGE.

Formulation

Supplied as 0.2 μm filtered solution in 20 mM HEPES, 150 mM NaCl, pH7.5 with trehalose as protectant.

Contact us for customized product form or formulation.

Shipping and Storage

This product is supplied and shipped on dry ice.

Please avoid repeated freeze-thaw cycles.

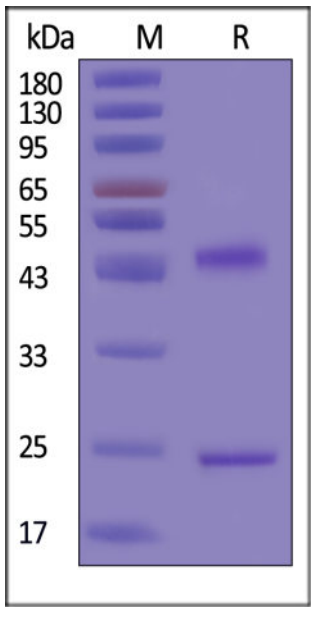
This product is stable after storage at:

- The product MUST be stored at -70°C or lower upon receipt;
- -70°C for 12 months under sterile conditions.

ACRO Quality Management System

- QMS(ISO, GMP)
- Quality Advantages
- Quality Control Process

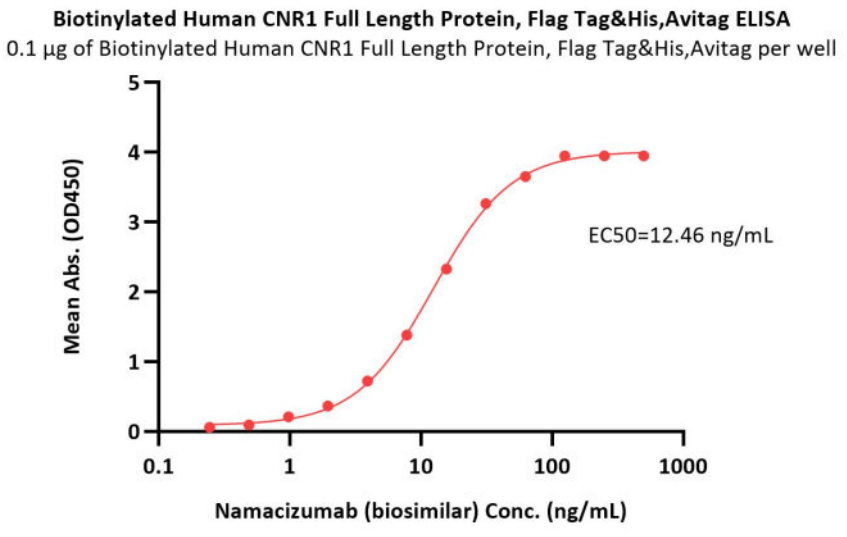
SDS-PAGE



Biotinylated Human CNR1 Full Length Protein, Flag Tag&His,Avitag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 90% (With Star Ribbon Pre-stained Protein Marker).

Activity-ELISA

Antibody



Immobilized Biotinylated Human CNR1 Full Length Protein, Flag Tag&His,Avitag (Cat. No. CN1-H85D4) at 1 μg/mL (100 μL/well) on streptavidin (Cat. No. STN-N5116) precoated (0.5 μg/well) plate can bind Namacizumab (biosimilar) with a linear range of 0.2-31 ng/mL (QC tested).

Background

This gene encodes one of two cannabinoid receptors. The cannabinoids, principally delta-9-tetrahydrocannabinol and synthetic analogs, are psychoactive ingredients of marijuana. The cannabinoid receptors are members of the guanine-nucleotide-binding protein (G-protein) coupled receptor family, which inhibit adenylate cyclase activity in a dose-dependent, stereoselective and pertussis toxin-sensitive manner. The two receptors have been found to be involved in the cannabinoid-induced CNS effects (including alterations in mood and cognition) experienced by users of marijuana. Multiple transcript variants encoding two different protein isoforms have been described for this gene.

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