

Datasheet for ABIN7491564

CCR5 Protein

2 Images

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Overview

Quantity:	100 µg
Target:	CCR5
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Synthetic Nanodisc

Product Details

Purpose:	Human CCR5 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:	CCR5
Alternative Name:	CCR5 (CCR5 Products)
Background:	A member of the beta chemokine receptor family, which is predicted to be a seven transmembrane protein similar to G protein-coupled receptors. This protein is expressed by T cells and macrophages, and is known to be an important co-receptor for macrophage-tropic virus, including HIV, to enter host cells. Defective alleles of this gene have been associated with the HIV infection resistance. The ligands of this receptor include monocyte chemoattractant

Target Details

protein 2 (MCP-2), macrophage inflammatory protein 1 alpha (MIP-1 alpha), macrophage inflammatory protein 1 beta (MIP-1 beta) and regulated on activation normal T expressed and secreted protein (RANTES). Expression of this gene was also detected in a promyeloblastic cell line, suggesting that this protein may play a role in granulocyte lineage proliferation and differentiation. This gene is located at the chemokine receptor gene cluster region. An allelic polymorphism in this gene results in both functional and non-functional alleles, the reference genome represents the functional allele.

Molecular Weight:	The human full length CCR5 protein has a MW of 40.5 kDa
UniProt:	P51681
Pathways:	Cellular Response to Molecule of Bacterial Origin , cAMP Metabolic Process , Regulation of Cell Size

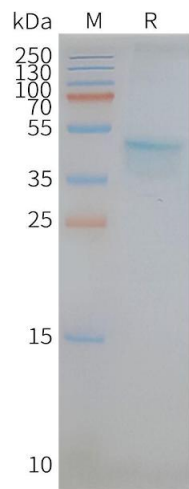
Application Details

Comment:	<p>Advantages of Synthetic Nanodiscs:</p> <ul style="list-style-type: none">• 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 <p>Limitations of Synthetic Nanodiscs:</p> <ul style="list-style-type: none">• 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.

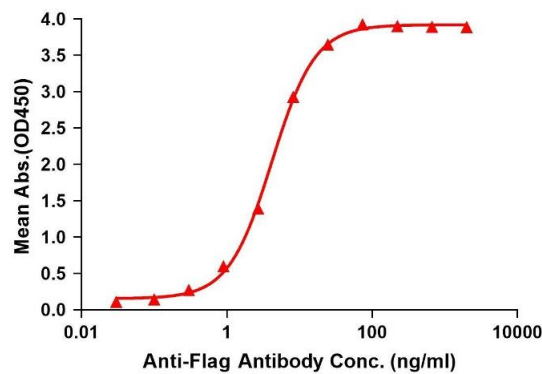
Expiry Date: 12 months



SDS-PAGE

Image 1. Human -Nanodisc, Flag Tag on SDS-PAGE

ELISA assay to evaluate CCR5-Nanodisc
0.2µg Human CCR5-Nanodisc per well



ELISA

Image 2. Elisa plates were pre-coated with Flag Tag - Nanodisc (0.2 µg/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 -Nanodisc is 4.18 ng/mL.