Datasheet for ABIN7538173

CD63 Protein (CD63)

2 Images

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Overview

Quantity:	50 µg
Target:	CD63
Origin:	Human
Source:	Mammalian Cells
Protein Type:	MSP Nanodisc

Product Details

Purpose:	Human CD63 full length protein membrane nanoparticles (MNPs)
Characteristics:	Plasma membrane-coated nanoparticles (MNPs) have been used in various applications, including delivery of therapeutic agents and induction of immune responses et al. Unlike the conventional strategies, MNPs directly leverage intact and natural functions of cell membranes, and show high biocompatibility, specificity, and low side effects. Our optimized MNPs platform for the full-length membrane protein production uses membrane coating technology and a HEK293 based expression platform. The high-purity plasma membrane-coated nanoparticles were produced by extrusion after membrane extraction from the host HEK293 cells containing the overexpressed target proteins.

Target Details

Target:	CD63
Alternative Name:	CD63 (CD63 Products)
Background:	The protein is a member of the transmembrane 4 superfamily, also known as the tetraspanin family. Most of these members are cell-surface proteins that are characterized by the presence

Target Details

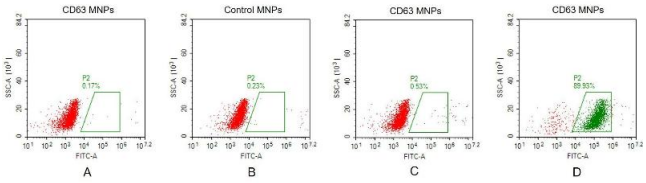
	of four hydrophobic domains. The proteins mediate signal transduction events that play a role in the regulation of cell development, activation, growth and motility. The encoded protein is a cell surface glycoprotein that is known to complex with integrins. It may function as a blood platelet activation marker. Deficiency of this protein is associated with Hermansky-Pudlak syndrome. Also this gene has been associated with tumor progression. Alternative splicing results in multiple transcript variants encoding different protein isoforms.
Molecular Weight:	The human full length CD63 protein has a MW of 25.6 kDa
UniProt:	P08962

Application Details

Comment:	Advantages of Membrane Nanoparticles (MNPs): • High display density of target membrane proteins • Native structure and orientation of transmembrane protein • soluble in aqueous solutions for routine biochemical analysis • Detergent-free purification process • Strong immunogenicity • Works for MPs that can´t be produced via VLPs and EXos Limitations of Membrane Nanoparticles (MNPs): • Lack of accurate quantification of the target membrane proteins. • Need to develop special SPR assayx. • Cell membranes contain housekeeping proteins that can result in immune response dilution. • Some membrane proteins can´t be enriched on membrane.
Restrictions:	For Research Use only

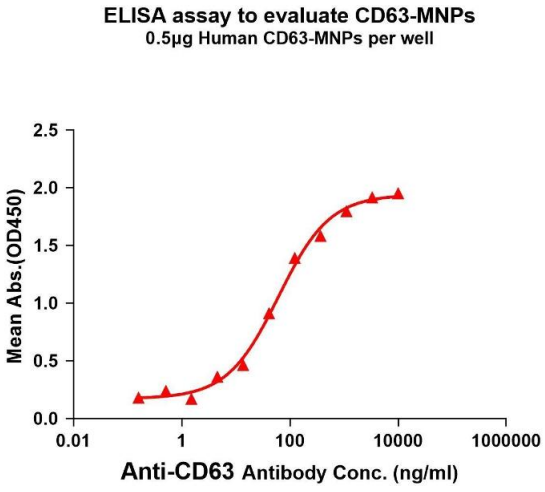
Handling

Format:	Lyophilized
Buffer:	Lyophilized from sterile PBS, pH 7.4. 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



Flow Cytometry

Image 1. FACS analysis of CD63 MNPs A. Negative Control 1: CD63 full length membrane nanoparticles samples were stained only with Goat anti-human IgG 488 secondary antibody. B. Negative Control 2: Control membrane nanoparticles samples were stained with anti-CD63 antibody (ABIN7455342, ABIN7490686 and ABIN7490688) at 2 µg/mL, followed by Goat anti-human IgG 488 secondary antibody. C. Negative Control 3: CD63 full length membrane nanoparticles samples were stained with anti-GD antibody (an irrelevant antibody) at 2 µg/mL, followed by Goat anti-human IgG 488 secondary antibody. D. CD63 full length membrane nanoparticles samples were stained with anti-CD63 antibody (ABIN7455342, ABIN7490686 and ABIN7490688) at 2 µg/mL, followed by Goat anti-human IgG 488 secondary antibody.



ELISA

Image 2. Elisa plates were pre-coated with 0.5 µg/per well purified human CD63 full length membrane nanoparticles. Serial diluted anti-CD63 monoclonal antibody (ABIN7455342, ABIN7490686 and ABIN7490688) solutions were added, washed, and incubated with secondary antibody before Elisa reading. From above data, the EC50 for anti-CD63 monoclonal antibody binding with CD63 full length membrane nanoparticles is 61.65 ng/mL.