



[Go to Product page](#)

Datasheet for ABIN7538390

CD20 Protein

2 Images

Overview

Quantity:	50 µg
Target:	CD20 (MS4A1)
Origin:	Human
Source:	Mammalian Cells
Protein Type:	MSP Nanodisc

Product Details

Purpose:	Human CD20 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:	CD20 (MS4A1)
Alternative Name:	CD20 (MS4A1 Products)
Background:	A member of the membrane-spanning 4A gene family. Members of this nascent protein family are characterized by common structural features and similar intron/exon splice boundaries and

Target Details

display unique expression patterns among hematopoietic cells and nonlymphoid tissues. This gene encodes a B-lymphocyte surface molecule which plays a role in the development and differentiation of B-cells into plasma cells. This family member is localized to 11q12, among a cluster of family members. Alternative splicing of this gene results in two transcript variants which encode the same protein.

Molecular Weight: The human full length CD20 protein has a MW of 33.1 kDa

UniProt: [P11836](#)

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.

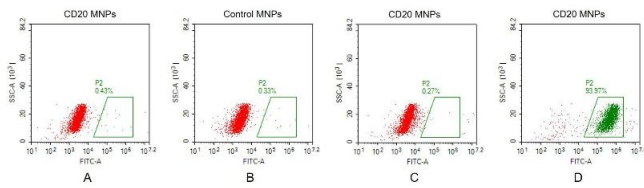
Storage: -20 °C, -80 °C

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.

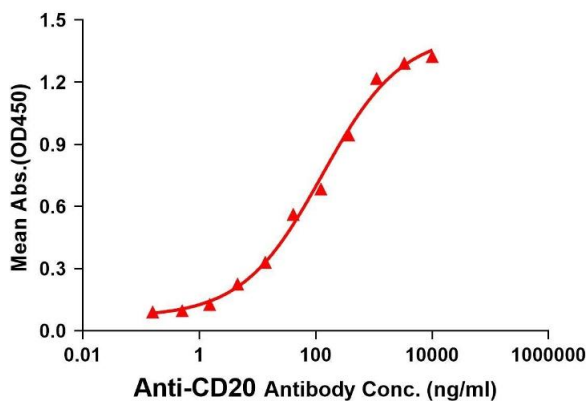
Expiry Date: 12 months

Flow Cytometry

Image 1. FACS analysis of CD20 MNPs. A. Negative Control 1: CD20 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-CD20 antibody ((ABIN7538770)) at 2 µg/mL, followed by Goat anti-human IgG 488 secondary antibody. C. Negative Control 3: CD20 full length membrane nanoparticles samples were stained with anti- antibody (an irrelevant antibody) at 2 µg/mL, followed by Goat anti-human IgG 488 secondary antibody. D. CD20 full length membrane nanoparticles samples were stained with anti-CD20 antibody ((ABIN7538770)) at 2 µg/mL, followed by Goat anti-human IgG 488 secondary antibody.



ELISA assay to evaluate CD20-MNPs
0.5µg Human CD20-MNPs per well



ELISA

Image 2. Elisa plates were pre-coated with 0.5 µg/per well purified human CD20 full length membrane nanoparticles. Serial diluted anti-CD20 monoclonal antibody ((ABIN7538770)) solutions were added, washed, and incubated with secondary antibody before Elisa reading. From above data, the EC50 for anti-CD20 monoclonal antibody binding with CD20 full length membrane nanoparticles is 128.8 ng/mL.