

Datasheet for ABIN7538566

TM4SF1 Protein**2** Images[Go to Product page](#)

Overview

Quantity:	50 µg
Target:	TM4SF1
Origin:	Human
Source:	Mammalian Cells
Protein Type:	MSP Nanodisc

Product Details

Purpose:	Human TM4SF1 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:	TM4SF1
Alternative Name:	TM4SF1 (TM4SF1 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. This encoded protein is a cell surface antigen and is highly expressed in different carcinomas.

Molecular Weight: The human full length TM4SF1 protein has a MW of 21.6 kDa

UniProt: [P30408](#)

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

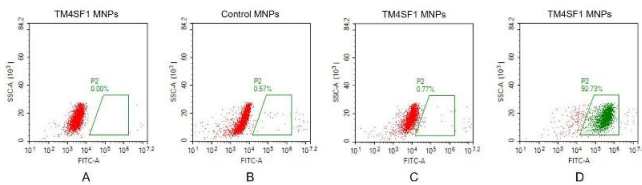
Format: Lyophilized

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.

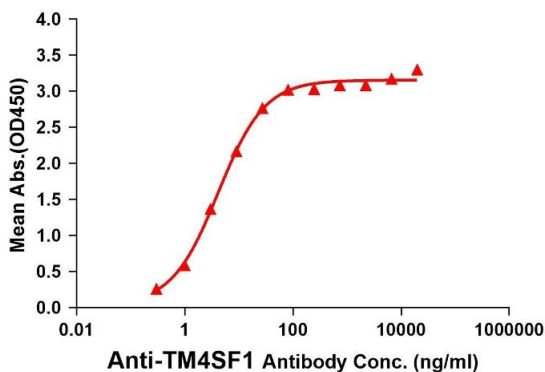
Expiry Date: 12 months



Flow Cytometry

Image 1. FACS analysis of TM4SF1 MNPs A. Negative Control 1: TM4SF1 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-TM4SF1 antibody at 2 µg/mL, followed by Goat anti-human IgG 488 secondary antibody. C. Negative Control 3: TM4SF1 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. TM4SF1 full length membrane nanoparticles samples were stained with anti-TM4SF1 antibody at 2 µg/mL, followed by Goat anti-human IgG 488 secondary antibody.

ELISA assay to evaluate TM4SF1-MNPs
0.5µg Human TM4SF1-MNPs per well



ELISA

Image 2. Elisa plates were pre-coated with 0.5 µg/per well purified human TM4SF1 full length membrane nanoparticles. Serial diluted anti-TM4SF1 monoclonal antibody solutions were added, washed, and incubated with secondary antibody before Elisa reading. From above data, the EC50 for anti-TM4SF1 monoclonal antibody binding with TM4SF1 full length membrane nanoparticles is 4.174 ng/mL.