

Datasheet for ABIN7538162

Caveolin-1 Protein**2** Images[Go to Product page](#)

Overview

Quantity:	50 µg
Target:	Caveolin-1 (CAV1)
Origin:	Human
Source:	Mammalian Cells
Protein Type:	Synthetic Nanodisc

Product Details

Purpose:	Human CAV1 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:	Caveolin-1 (CAV1)
Alternative Name:	CAV1 (CAV1 Products)
Background:	The scaffolding protein is the main component of the caveolae plasma membranes found in most cell types. The protein links integrin subunits to the tyrosine kinase FYN, an initiating step in coupling integrins to the Ras-ERK pathway and promoting cell cycle progression. The gene is a tumor suppressor gene candidate and a negative regulator of the Ras-p42/44 mitogen-activated kinase cascade. Caveolin 1 and caveolin 2 are located next to each other on

Target Details

chromosome 7 and express colocalizing proteins that form a stable hetero-oligomeric complex. Mutations in this gene have been associated with Berardinelli-Seip congenital lipodystrophy. Alternatively spliced transcripts encode alpha and beta isoforms of caveolin 1.

Molecular Weight: The human full length CAV1 protein has a MW of 20.3 kDa

UniProt: [Q03135](#)

Pathways: [Maintenance of Protein Location](#), [Signaling Events mediated by VEGFR1 and VEGFR2](#), [Negative Regulation of Transporter Activity](#), [VEGFR1 Specific Signals](#)

Application Details

Comment: Advantages of Synthetic Nanodiscs:

- 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

Limitations of Synthetic Nanodiscs:

- 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.

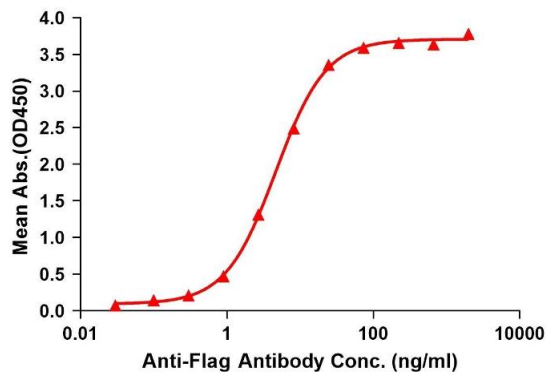
Expiry Date: 12 months



SDS-PAGE

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

ELISA assay to evaluate CAV1-Nanodisc
0.2µg Human CAV1-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 4.671 ng/mL.