

Recombinant Mouse CAV1 Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51453

Size: 10ug, 100ug

Protein Name: Caveolin-1

Synonym: Cav1, Cav

UniProt ID: P49817

UniProt Link: www.uniprot.org/uniprotkb/P49817/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 178 AA

Molecular Weight: 21 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MSGGKYVDSEGHLYTVPIREQGNIYKPNNKAMADEVTEKQVYDAHTKEIDLVNRPKHLNDDVVKID
FEDVIAEPEGTHSFDGIWKASFTTFTVTKYWFYRLLSTIFGIPMALIWGIYFAILSFLHIWAVVPCIKSFLI
EIQCISRVYSIYVHTFCDPLFEAIGKIFSNIRISTQKEI

3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Caveolin-1 produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: May act as a scaffolding protein within caveolar membranes (By similarity). Forms a stable heterooligomeric complex with CAV2 that targets to lipid rafts and drives caveolae formation. Mediates the recruitment of CAVIN proteins (CAVIN1/2/3/4) to the caveolae (PubMed:19546242). Interacts directly with G protein alpha subunits and can functionally regulate their activity (By similarity). Involved in the costimulatory signal essential for T-cell receptor (TCR)-mediated T-cell activation. Its binding to DPP4 induces T-cell proliferation and NF-kappa-B activation in a T-cell receptor/CD3-dependent manner (By similarity). Recruits CTNNB1 to caveolar membranes and may regulate CTNNB1-mediated signaling through the Wnt pathway (PubMed:10816572). Negatively regulates TGFB1-mediated activation of SMAD2/3 by mediating the internalization of TGFBR1 from membrane rafts leading to its subsequent degradation (By similarity). Binds 20(S)-hydroxycholesterol (20(S)-OHC) (PubMed:34799735).

Subcellular Localization: Golgi apparatus membrane ; Peripheral membrane protein . Cell membrane ; Peripheral membrane protein . Membrane, caveola ; Peripheral membrane protein . Membrane raft . Golgi apparatus, trans-Golgi network . Cytoplasm . Note=Colocalized with DPP4 in membrane rafts. Potential hairpin-like structure in the membrane. Membrane protein of caveolae (By similarity). In the presence of DSG2 localizes to the cytoplasm away from cell borders (By similarity).

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.