

Recombinant human DPP4 protein ab155725

1 Image

Description

Product name	Recombinant human DPP4 protein
Biological activity	Measured by its ability to cleave the fluorogenic peptide substrate, Gly-Pro-7-amido-4-methylcoumarin (GP-AMC). The specific activity is > 5500 pmoles /min /µg.
Purity	> 95 % SDS-PAGE. ab155725 was lyophilized from 0.22 µm filtered solution.
Endotoxin level	< 1.000 Eu/µg
Expression system	HEK 293 cells
Accession	<u>P27487</u>
Protein length	Protein fragment
Animal free	No
Nature	Recombinant
Species	Human
Sequence	<p>NKGTDDATADSRKTYTLTDYLNKNTYRLKLYSLRWISDHEYL YKQENNILV FNAEYGNSSVFLENSTFDEFGHSINDYSISPDGQFILLEINY VKQWRHSY TASYDIYDLNKRQLITEERIPNNTQWVTWSPVGHKLAYVWN NDIYVKIEP NLPSYRITWTGKEDIYNGITDWYEEEFVSAYSALWWSPN GTFLAYAQF NDTEVPLIEYSFYSDSLQYPKTVRVPYPKAGAVNPTVKF FVVNTDSLSS VTNATSIQITAPASMLIGDHLYCDVTWATQERISLQWLRRIQ NYSVMDIC DYDESSGRWNCLVARQHIEMSTTGWVGRFRPSEPHFTLD GNSFYKISNE EGYRHICYFQIDKKDCTFITKGTWEVIGIEALTSDYLYISNEY KGMPGG RNLYKIQLSDYTKVTCLSCELNPERCQYYSVSFSKEAKYYQ LRCSGPGLP LYTLHSSVNDKGLRVLEDNSALDKMLQNVQMPSKKLDFIL NETKFWYQM ILPPHFDKSKKYPLLLDVYAGPCSQKADTVFRLNWATYLA STENIVASF</p>

DGRGSGYQGDKIMHAINRRLGTFEVEDQIEAARQFSKMGF
VDNKRIAMWG
WSYGGYVTSMLVLSGSGVFKCGIAPVSRWEYDSVYT
ERYMGLPTPED
NLDHYRNSTVMSRAENFKQVEYLLHGTADDNVHFQQSA
QISKALVDVGV
DFQAMWYTDEDHGASSTAHQHIYTHMSHFQKCFSLP

Predicted molecular weight	85 kDa
Molecular weight information	The protein has a calculated MW of 85.5 kDa. The protein migrates as 90-116 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.
Amino acids	29 to 766

Specifications

Our **Abpromise guarantee** covers the use of **ab155725** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	Functional Studies SDS-PAGE
Form	Lyophilized

Preparation and Storage

Stability and Storage	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle. pH: 7.40 Constituents: 95% PBS, 5% Trehalose This product is an active protein and may elicit a biological response in vivo, handle with caution.
Reconstitution	Reconstitute with sterile deionized water to a concentration of 200 µg/ml.

General Info

Function	Cell surface glycoprotein receptor involved in the costimulatory signal essential for T-cell receptor (TCR)-mediated T-cell activation. Acts as a positive regulator of T-cell coactivation, by binding at least ADA, CAV1, IGF2R, and PTPRC. Its binding to CAV1 and CARD11 induces T-cell proliferation and NF-kappa-B activation in a T-cell receptor/CD3-dependent manner. Its interaction with ADA also regulates lymphocyte-epithelial cell adhesion. In association with FAP is involved in the pericellular proteolysis of the extracellular matrix (ECM), the migration and invasion of endothelial cells into the ECM. May be involved in the promotion of lymphatic endothelial cells adhesion, migration and tube formation. When overexpressed, enhanced cell proliferation, a process inhibited by GPC3. Acts also as a serine exopeptidase with a dipeptidyl peptidase activity that regulates various physiological processes by cleaving peptides in the circulation, including many chemokines, mitogenic growth factors, neuropeptides and peptide hormones. Removes N-terminal dipeptides sequentially from polypeptides having unsubstituted N-termini provided that the penultimate residue is proline.
Tissue specificity	Expressed specifically in lymphatic vessels but not in blood vessels in the skin, small intestine, esophagus, ovary, breast and prostate glands. Not detected in lymphatic vessels in the lung,

kidney, uterus, liver and stomach (at protein level). Expressed in the poorly differentiated crypt cells of the small intestine as well as in the mature villous cells. Expressed at very low levels in the colon.

Sequence similarities

Belongs to the peptidase S9B family, DPPIV subfamily.

Domain

The extracellular cysteine-rich region is necessary for association with collagen, dimer formation and optimal dipeptidyl peptidase activity.

Post-translational modifications

The soluble form (Dipeptidyl peptidase 4 soluble form also named SDPP) derives from the membrane form (Dipeptidyl peptidase 4 membrane form also named MDPP) by proteolytic processing.

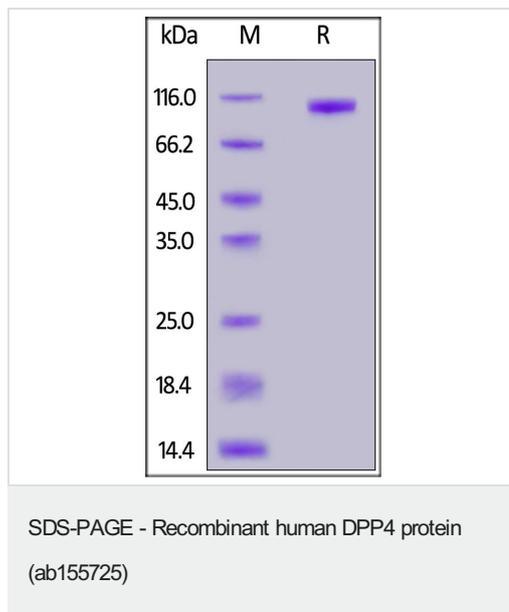
N- and O-Glycosylated.

Phosphorylated. Mannose 6-phosphate residues in the carbohydrate moiety are necessary for interaction with IGF2R in activated T-cells. Mannose 6-phosphorylation is induced during T-cell activation.

Cellular localization

Cell membrane. Apical cell membrane. Cell projection > invadopodium membrane. Cell projection > lamellipodium membrane. Cell junction. Membrane raft. Translocated to the apical membrane through the concerted action of N- and O-Glycans and its association with lipid microdomains containing cholesterol and sphingolipids. Redistributed to membrane rafts in T-cell in a interleukin-12-dependent activation. Its interaction with CAV1 is necessary for its translocation to membrane rafts. Colocalized with PTPRC in membrane rafts. Colocalized with FAP in invadopodia and lamellipodia of migratory activated endothelial cells in collagenous matrix. Colocalized with FAP on endothelial cells of capillary-like microvessels but not large vessels within invasive breast ductal carcinoma. Colocalized with ADA at the cell junction in lymphocyte-epithelial cell adhesion. Colocalized with IGF2R in internalized cytoplasmic vesicles adjacent to the cell surface and Secreted. Detected in the serum and the seminal fluid.

Images



SDS-PAGE under reducing (R) condition of untagged human DPP4 (Ab155725). The gel was stained overnight with Coomassie Blue.

The purity of the protein is greater than 95%.

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