abcam

Product datasheet

Anti-DPP4 antibody [236.3] ab119346

5 References 5 Images

Overview

Product name	Anti-DPP4 antibody [236.3]
Description	Mouse monoclonal [236.3] to DPP4
Host species	Mouse
Tested applications	**Suitable for:** ICC/IF, Flow Cyt
Species reactivity	**Reacts with:** Rat, Human
Immunogen	Full length protein corresponding to Rat DPP4. Full length native protein
General notes	The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at -20°C.
Storage buffer	Constituent: 99% PBS
Purity	Protein G purified
Clonality	Monoclonal
Clone number	236.3
Isotype	IgG2b
Light chain type	kappa

Applications

The Abpromise guarantee	Our **Abpromise guarantee** covers the use of ab119346 in the following tested applications.

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

Application	Abreviews	Notes
ICC/IF		1/20 - 1/200.
Flow Cyt		Use at an assay dependent concentration. **ab170192** - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

Target

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

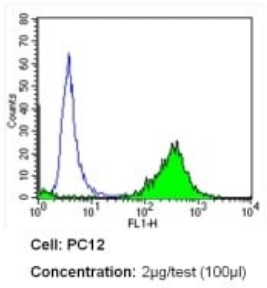
The soluble form (Dipeptidyl peptidase 4 soluble form also named SDPP) derives from the membrane form (Dipeptidyl peptidase 4 membrane form also named MDPP) by proteolytic processing.
N- and O-Glycosylated.
Phosphorylated. Mannose 6-phosphate residues in the carbohydrate moiety are necessary for interaction 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

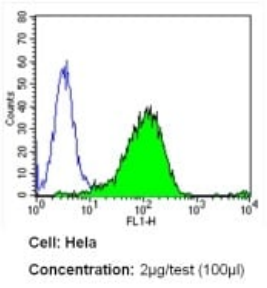
adjacent to the cell surface and Secreted. Detected in the serum and the seminal fluid.

Images



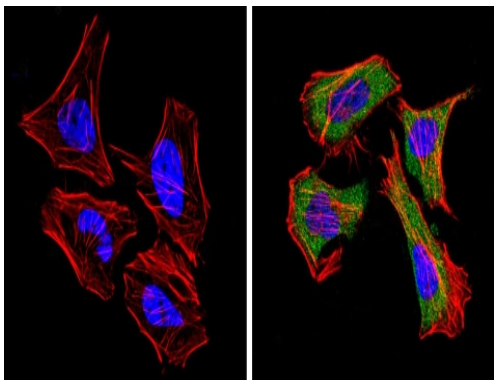
Flow Cytometry - Anti-DPP4 antibody [236.3] (ab119346)

Flow cytometry analysis of CD26 in PC12 cells (green) compared to an isotype control (blue). Cells were harvested, adjusted to a concentration of 1-5x10^6 cells/ml, fixed with 2% paraformaldehyde and washed with PBS. Cells were blocked with a 2% solution of BSA-PBS for 30 min at room temperature and incubated with a CD26 monoclonal antibody (ab119346) at a dilution of 2 ug/test for 60 min at room temperature. Cells were then incubated for 40 min at room temperature in the dark using a Dylight 488-conjugated secondary antibody and re-suspended in PBS for FACS analysis.



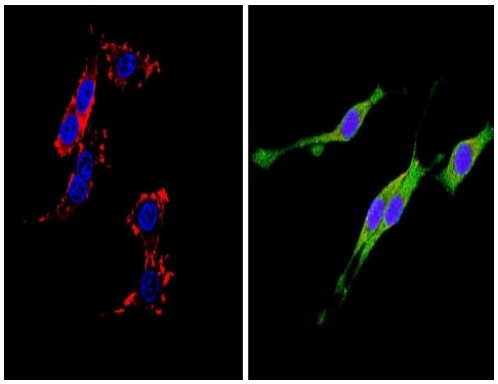
Flow Cytometry - Anti-DPP4 antibody [236.3] (ab119346)

Flow cytometry analysis of CD26 in Hela cells (green) compared to an isotype control (blue). Cells were harvested, adjusted to a concentration of 1-5x10^6 cells/ml, fixed with 2% paraformaldehyde and washed with PBS. Cells were blocked with a 2% solution of BSA-PBS for 30 min at room temperature and incubated with a CD26 monoclonal antibody (ab119346) at a dilution of 2 ug/test for 60 min at room temperature. Cells were then incubated for 40 min at room temperature in the dark using a Dylight 488-conjugated secondary antibody and re-suspended in PBS for FACS analysis.



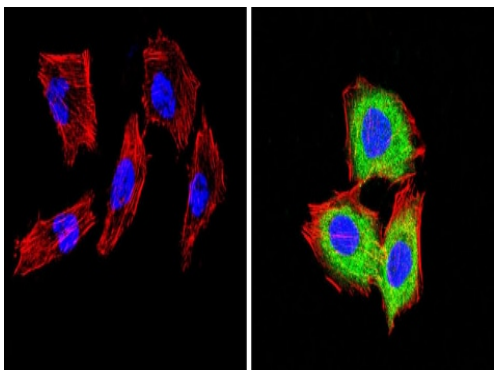
Immunocytochemistry/ Immunofluorescence - Anti-DPP4 antibody [236.3] (ab119346)

ab119346 labelling CD26 (green) in the cytoplasm of HeLa cells (right) compared with a negative control (left) by Immunocytochemistry/Immunofluorescence. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were incubated with the primary antibody (1:20 in 3% BSA-PBS) overnight at 4 ºC. A DyLight 488-conjugated Goat anti-mouse IgG (H+L) was used as the secondary antibody. Red (phalloidin) - F-actin, Blue (DAPI) - nuclei. Images were taken at a magnification of 60x.



Immunocytochemistry/ Immunofluorescence - Anti-DPP4 antibody [236.3] (ab119346)

ab119346 labelling CD26 (green) in the cytoplasm of PC12 cells (right) compared with a negative control (left) by Immunocytochemistry/Immunofluorescence. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were incubated with the primary antibody (1:20 in 3% BSA-PBS) overnight at 4 ºC. A DyLight 488-conjugated Goat anti-mouse IgG (H+L) was used as the secondary antibody. Red (phalloidin) - F-actin, Blue (DAPI) - nuclei. Images were taken at a magnification of 60x.



Immunocytochemistry/ Immunofluorescence - Anti-DPP4 antibody [236.3] (ab119346)

ab119346 labelling CD26 (green) in the cytoplasm of H-4-II-E cells (right) compared with a negative control (left) by Immunocytochemistry/Immunofluorescence. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were incubated with the primary antibody (1:20 in 3% BSA-PBS) overnight at 4 ºC. A DyLight 488-conjugated Goat anti-mouse IgG (H+L) was used as the secondary antibody. Red (phalloidin) - F-actin, Blue (DAPI) - nuclei. Images were taken at a magnification of 60x.

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