abcam

ab119346

Anti-DPP4 antibody [236.3]

Key facts

Isotype	IgG2b
Host species	Mouse
Storage buffer	Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Full Length Protein corresponding to Rat Dpp4. The exact immunogen used to generate this antibody is proprietary information. Database link P14740
Clone number	236.3
Purification technique	Affinity purification Protein G
Light chain type	kappa
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Rat
Dilution info	-
Notes	ab170192 - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

Species	Human
Dilution info	-
Notes	ab170192 - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

ICC/IF

Tested

Species	Rat
Dilution info	1/20 - 1/200
Notes	-

Species	Human
Dilution info	1/20 - 1/200
Notes	-

Target data

See full target information DPP4

Function

Cell surface glycoprotein receptor involved in the costimulatory signal essential for T-cell receptor (TCR)-mediated T-cell activation (PubMed:10900005, PubMed:10951221, PubMed:11772392, PubMed:17287217). Acts as a positive regulator of T-cell coactivation, by binding at least ADA, CAV1, IGF2R, and PTPRC (PubMed:10900005, PubMed:10951221, PubMed:11772392, PubMed:14691230). Its binding to CAV1 and CARD11 induces T-cell proliferation and NF-kappa-B activation in a T-cell receptor/CD3-dependent manner (PubMed:17287217). Its interaction with ADA also regulates lymphocyte-epithelial cell adhesion (PubMed:11772392). 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 (PubMed:10593948, PubMed:16651416). May be involved in the promotion of lymphatic endothelial cells adhesion, migration and tube formation (PubMed:18708048). When overexpressed, enhanced cell proliferation, a process inhibited by GPC3 (PubMed:17549790). Also acts 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 such as brain natriuretic peptide 32 (PubMed:10570924, PubMed:16254193). Removes N-terminal dipeptides sequentially from polypeptides having unsubstituted N-termini provided that the penultimate residue is proline (PubMed:10593948). (Microbial infection) Acts as a receptor for human coronavirus MERS-CoV-2.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Dipeptidyl peptidase 4 also known as DPP4 or CD26 functions as a serine exopeptidase. This enzyme is involved in cleaving dipeptides from the N-terminus of polypeptides. DPP4 with a mass of approximately 110 kDa is expressed in various tissues such as the liver intestines kidney and lymphocytes. It exists in both a membrane-bound form and a soluble form in blood plasma.
Biological function summary	DPP4 plays a significant role in glucose metabolism and immune function. The enzyme interacts with members of the immune system and regulates proteins such as chemokines growth factors and neuropeptides. DPP4 acts independently and is not known to be part of a larger complex. It modulates biological processes by inactivating peptide hormones and signaling molecules which impacts glucose homeostasis and immune responses.
Pathways	DPP4 impacts the incretin signaling pathway and the immune response pathway. Incretin hormones like glucagon-like peptide-1 (GLP-1) and glucose-dependent insulinotropic polypeptide (GIP) are substrates of DPP4 and play important roles in glucose metabolism. DPP4 also interacts with proteins such as adenosine deaminase (ADA) which impacts T-cell function and immune regulation. The regulation of these pathways by DPP4 influences metabolic and immune health.
Associated diseases and disorders	DPP4 involvement is relevant in type 2 diabetes and immunological disorders. In type 2 diabetes DPP4 inhibitors modulate the incretin hormones improving glycemic control. Proteins like GLP-1 are affected by DPP4 activity connecting it to diabetes management. In autoimmune diseases altered DPP4 expression can impact immune cell functions influencing conditions such as rheumatoid arthritis. Through its effects on ADA and associated pathways DPP4 can influence both metabolic and immune-related disorders.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

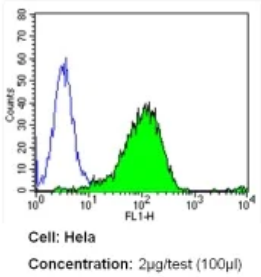
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In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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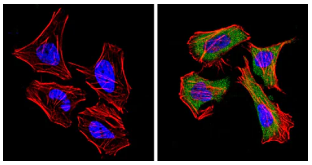
5 product images



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

DPP4 Flow Cytometry staining using mouse Anti-DPP4 antibody

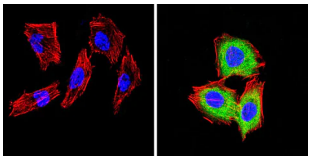
Flow cytometry analysis of CD26 in Hela cells (green) compared to an isotype control (blue). Cells were harvested, adjusted to a concentration of 1-5x10^6 cells/ml, fixed with 2% paraformaldehyde and washed with PBS. Cells were blocked with a 2% solution of BSA-PBS for 30 min at room temperature and 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)

DPP4 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-DPP4 antibody

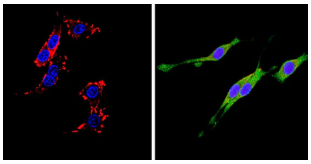
ab119346 labelling CD26 (green) in the cytoplasm of HeLa cells (right) compared with a negative control (left) by Immunocytochemistry/Immunofluorescence. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were incubated with the primary antibody (1:20 in 3% BSA-PBS) overnight at 4 °C. 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)

DPP4 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-DPP4 antibody

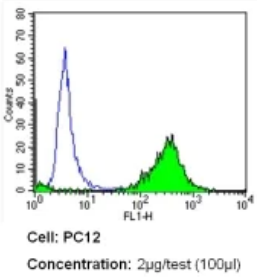
ab119346 labelling CD26 (green) in the cytoplasm of H-4-II-E cells (right) compared with a negative control (left) by Immunocytochemistry/Immunofluorescence. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were incubated with the primary antibody (1:20 in 3% BSA-PBS) overnight at 4 °C. 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)

DPP4 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-DPP4 antibody

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 °C. 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.



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

DPP4 Flow Cytometry staining using mouse Anti-DPP4 antibody

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.

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