abcam

ab234103

Anti-DPP4 antibody [EPR21945] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR21945
Purification technique	Affinity purification Protein A
Concentration	0.977 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Mouse
Dilution info	-

Notes	-

Not recommended

Species	Recombinant fragment - Mouse, Recombinant fragment
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Mouse
Dilution info	-
Notes	-

Not recommended

Species	Recombinant fragment - Mouse, Recombinant fragment
Dilution info	-
Notes	-

ELISA

Tested

Species	Recombinant fragment - Mouse
Dilution info	-
Notes	-

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Recombinant fragment
Dilution info	-
Notes	-

WB

Expected

Species	Recombinant fragment, Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Recombinant fragment - Mouse
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	-
Notes	-

Not recommended

Species	Recombinant fragment - Mouse, Recombinant fragment
Dilution info	-
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. 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. 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. Removes N-terminal dipeptides sequentially from polypeptides having unsubstituted N-termini provided that the penultimate residue is proline.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab234103 is the carrier-free version of ab222716.

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?

This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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.

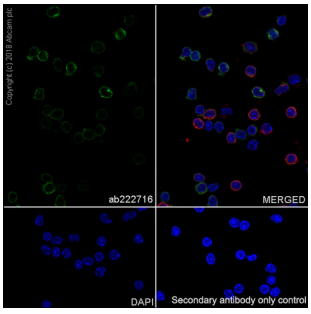
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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

Full details and terms and conditions can be found here:
Terms & Conditions.

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4 product images



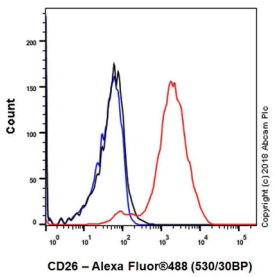
Immunocytochemistry/ Immunofluorescence - Anti-DPP4 antibody [EPR21945] - BSA and Azide free (ab234103)

DPP4 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-DPP4 antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized mouse PBMC (mouse peripheral blood mononuclear cells) cells labeling CD26 with ab222716 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing membranous staining in mouse PBMCs. The nuclear counter stain is DAPI (blue).
Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) (red).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) at 1/1000 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab222716).

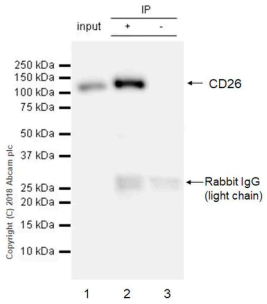


Flow Cytometry - Anti-DPP4 antibody [EPR21945] - BSA and Azide free (ab234103)

DPP4 Flow Cytometry staining using rabbit Anti-DPP4 antibody

Flow cytometric analysis of mouse PBMCs (mouse peripheral blood mononuclear cells) labeling CD26 with ab222716 at 1/500 dilution (red) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) at 1/2000 dilution was used as the secondary antibody.
Gated on viable cells.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab222716).



Immunoprecipitation - Anti-DPP4 antibody [EPR21945] - BSA and Azide free (ab234103)

CD26 was immunoprecipitated from 0.35mg of mouse lung tissue lysate with ab222716 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab222716 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/5000 dilution.
Lane 1: Mouse lung tissue lysate 10 µg (Input).

Lane 2: ab222716 IP in mouse lung tissue lysate.

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab222716 in mouse lung tissue lysate.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

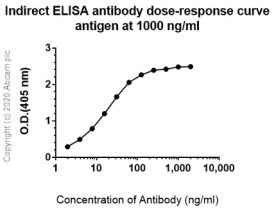
Exposure time: 30 seconds.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab222716).

All lanes:
Immunoprecipitation - Anti-DPP4 antibody [EPR21945] (ab222716)

Predicted band size: 88 kDa

Observed band size: 110 kDa



ELISA - Anti-DPP4 antibody [EPR21945] - BSA and Azide free (ab234103)

This data was developed using ab222716, the same antibody clone in a different buffer formulation.
ELISA analysis of Mouse Dpp4 recombinant protein at 1000 ng/mL with ab222716. An Alkaline Phosphatase-conjugated AffiniPure Goat Anti-Rabbit IgG (H+L) at 1/2500 dilution was used as the secondary antibody.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.