abcam

Product datasheet

Mouse DPP4 ELISA Kit (CD26) ab264630

Recombinant SimpleStep ELISA

2 References 5 Images

Overview

Product name Mouse DPP4 ELISA Kit (CD26)

Detection method Colorimetric

Precision

Intra-assay

Sample	n	Mean	SD	CV%
Serum	8			2.9%

Inter-assay

Sample	n	Mean	SD	CV%
Serum	3			5.2%

Sample type Cell culture supernatant, Urine, Serum, Hep Plasma, EDTA Plasma, Cit plasma

Assay type Sandwich (quantitative)

Sensitivity 39 pg/ml

Range 93.75 pg/ml - 6000 pg/ml

Recovery

Sample specific recovery

Sample type	Average %	Range
Cell culture supernatant	120	113% - 128%
Urine	116	113% - 118%
Serum	100	92% - 113%
Cell culture media	100	99% - 102%
Hep Plasma	99	92% - 102%
EDTA Plasma	110	101% - 118%

Sample type	Average %	Range
Cit plasma	111	105% - 115%

Assay time 1h 30m

Assay duration One step assay

Species reactivity **Reacts with:** Mouse

Product overview Mouse DPP4 ELISA Kit (CD26) (ab264630) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of DPP4 (CD26) protein in cell culture supernatant, cit plasma, edta plasma, hep plasma, serum, and urine. It uses our proprietary SimpleStep ELISA® technology. Quantitate Mouse DPP4 (CD26) with 39 pg/ml sensitivity.

SimpleStep ELISA® technology employs capture antibodies conjugated to an affinity tag that is recognized by the monoclonal antibody used to coat our SimpleStep ELISA® plates. This approach to sandwich ELISA allows the formation of the antibody-analyte sandwich complex in a single step, significantly reducing assay time. See the SimpleStep ELISA® protocol summary in the image section for further details. Our SimpleStep ELISA® technology provides several benefits:

- Single-wash protocol reduces assay time to 90 minutes or less
- High sensitivity, specificity and reproducibility from superior antibodies
- Fully validated in biological samples
- 96-wells plate breakable into 12 x 8 wells strips

A 384-well SimpleStep ELISA® microplate (**ab203359**) is available to use as an alternative to the 96-well microplate provided with SimpleStep ELISA® kits.

Notes DPP4, also known as CD26, is a cell surface glycoprotein receptor involved in the costimulatory signal essential for T-cell receptor-mediated T-cell activation. DPP4 is 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.

Platform Pre-coated microplate (12 x 8 well strips)

Properties

Storage instructions Store at +4°C. Please refer to protocols.

Components	1 x 96 tests
10X Mouse DPP4 (CD26) Capture Antibody	1 x 600µl
10X Mouse DPP4 (CD26) Detector Antibody	1 x 600µl
10X Wash Buffer PT (ab206977)	1 x 20ml
Antibody Diluent 5BR	1 x 6ml

Components	1 x 96 tests
Mouse DPP4 (CD26) Lyophilized Recombinant Protein	2 vials
Plate Seals	1 unit
Sample Diluent NS (ab193972)	2 x 50ml
SimpleStep Pre-Coated 96-Well Microplate (ab206978)	1 unit
Stop Solution	1 x 12ml
TMB Development Solution	1 x 12ml

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

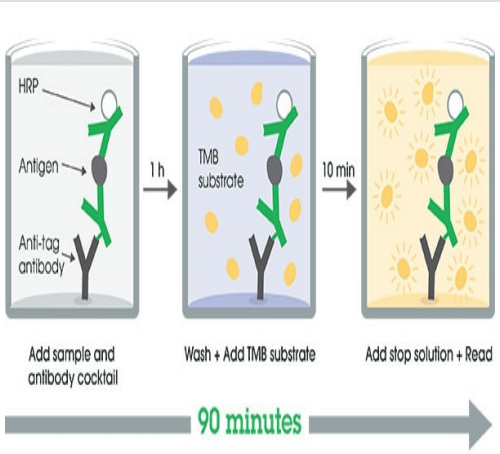
The soluble form (Dipeptidyl peptidase 4 soluble form also named SDPP) derives from the membrane form (Dipeptidyl peptidase 4 membrane form also named MDPP) by proteolytic processing.
N- and O-Glycosylated.
Phosphorylated. Mannose 6-phosphate residues in the carbohydrate moiety are necessary for interaction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

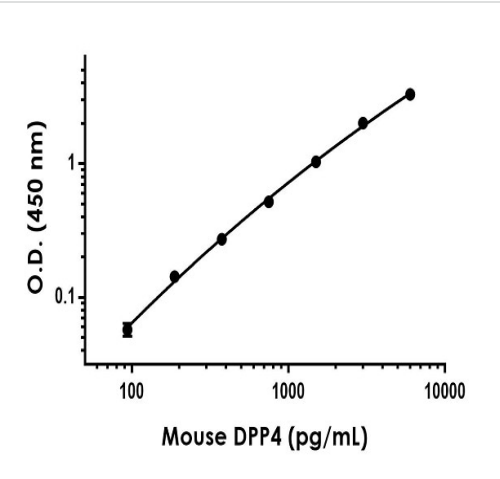
vessels within invasive breast ductal carcinoma. Colocalized with ADA at the cell junction in lymphocyte-epithelial cell adhesion. Colocalized with IGF2R in internalized cytoplasmic vesicles adjacent to the cell surface and Secreted. Detected in the serum and the seminal fluid.

Images



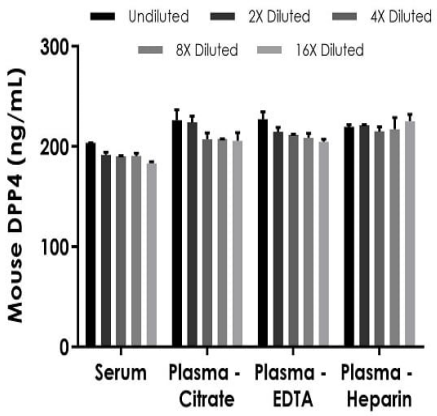
SimpleStep ELISA Protocol Diagram

SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.



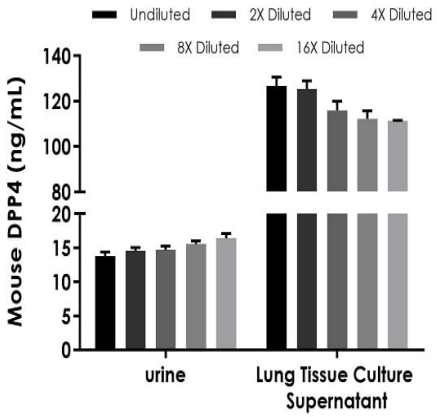
Example of mouse DPP4 standard curve in Sample Diluent NS.

The DPP4 standard curve was prepared as described in Section 10. Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.



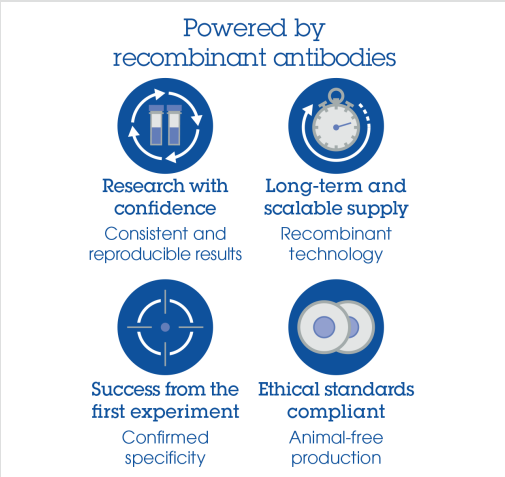
Interpolated concentrations of native DPP4 in mouse serum and plasma samples.

The concentrations of DPP4 were measured in duplicates, interpolated from the DPP4 standard curves and corrected for sample dilution. Undiluted samples are as follows: serum 2%, plasma (citrate) 2%, plasma (EDTA) 2% and plasma (heparin) 2%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean DPP4 concentration was determined to be 192 ng/mL in neat serum, 214 ng/mL in neat plasma (citrate), 213 ng/mL in neat plasma (EDTA) and 220 ng/mL in neat plasma (heparin).



Interpolated concentrations of native DPP4 in mouse urine and lung tissue culture supernatant samples.

The concentrations of DPP4 were measured in duplicates, interpolated from the DPP4 standard curves and corrected for sample dilution. Undiluted samples are as follows: urine 20%, lung tissue culture supernatant 4%. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean DPP4 concentration was determined to be 15 ng/mL in neat urine and 118 ng/mL in neat lung tissue culture supernatant



Sandwich ELISA - Mouse DPP4 ELISA Kit (CD26) (ab264630)

To learn more about the advantages of recombinant antibodies see **here**.

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