Datasheet for ABIN1672773

DPP4 ELISA Kit

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Overview

Quantity:	96 tests
Target:	DPP4
Binding Specificity:	AA 34-766
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	312-20000 pg/mL
Minimum Detection Limit:	312 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human CD26/DPP4
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA), Saliva, Urine
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: NSO Immunogen sequence: D34-P766
Specificity:	Expression system for standard: NSO Immunogen sequence: D34-P766
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity:	<10pg/mL
Material not included:	Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g Nacl

Target Details

Target:	DPP4
Alternative Name:	DPP4 (DPP4 Products)
Background:	Protein 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. . Background: Dipeptidyl peptidase-4(DPP4), also known as adenosine deaminase complexing protein 2 or CD26(cluster of differentiation 26) is a protein that, in humans, is encoded by the DPP4 gene. By fluorescence in situ hybridization, the CD26 gene was mapped to 2q24.3. DPP4 plays a major role in glucose metabolism. It is responsible for the degradation of incretins such as GLP-1. Furthermore, it appears to work as a suppressor in the development of cancer and tumours. CD26/ DPP4 plays an important role in tumor biology, and is useful as a marker for various cancers, with its levels either on the cell surface or in the serum increased in some neoplasms and decreased in others. Synonyms: Dipeptidyl peptidase 4,3.4.14.5 ,ADABP,Adenosine deaminase complexing protein 2,ADCP-2,Dipeptidyl peptidase IV,DPP IV,T-cell activation antigen CD26,TP103,CD26,Dipeptidyl peptidase 4 membrane form,Dipeptidyl peptidase IV membrane form,Dipeptidyl peptidase 4 soluble form,Dipeptidyl peptidase IV soluble form,DPP4,ADCP2, CD26,

Target Details

	Full Gene Name: Dipeptidyl peptidase 4 Cellular Localisation: Dipeptidyl peptidase 4 soluble form: Secreted. Detected in the serum and the seminal fluid.
Gene ID:	1803
UniProt:	P27487
Pathways:	Peptide Hormone Metabolism, Regulation of Leukocyte Mediated Immunity

Application Details

Application Notes:	Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well assay was recommended for both standard and sample testing.
Comment:	Sequence similarities: Belongs to the peptidase S9B family. DPPIV subfamily. 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. .
Plate:	Pre-coated
Protocol:	human CD26 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for CD26 has been precoated onto 96-well plates. Standards(NSO, D34-P766) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for CD26 is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the human CD26 amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 20000pg/mL, 10000pg/mL, 5000pg/mL, 2500pg/mL, 1250pg/mL, 625pg/mL, 312pg/mL human CD26 standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of human cell culture supernates, serum, plasma(heparin, EDTA) saliva or urine to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human CD26 standard solution and each sample be measured in duplicate.

Application Details

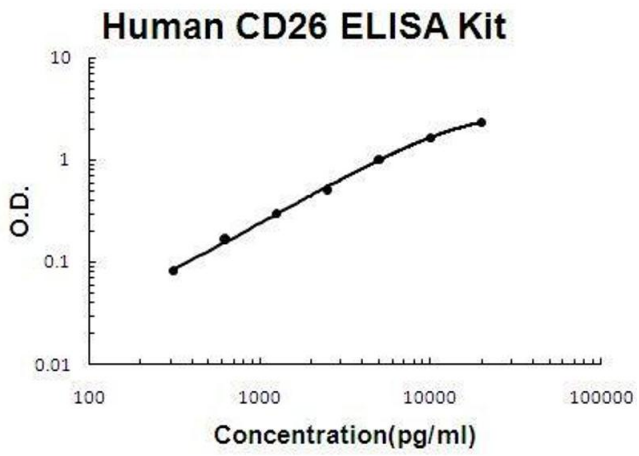
Assay Precision:	• Sample 1: n=16, Mean(ng/ml): 1.58, Standard deviation: 0.098, CV(%): 6.2 • Sample 2: n=16, Mean(ng/ml): 7.23, Standard deviation: 0.513, CV(%): 7.1 • Sample 3: n=16, Mean(ng/ml): 12.07, Standard deviation: 0.881, CV(%): 7.3, • Sample 1: n=24, Mean(ng/ml): 1.66, Standard deviation: 0.126, CV(%): 7.6 • Sample 2: n=24, Mean(ng/ml): 7.59, Standard deviation: 0.645, CV(%): 8.5 • Sample 3: n=24, Mean(ng/ml): 12.83, Standard deviation: 1.052, CV(%): 8.2
Restrictions:	For Research Use only

Handling

Handling Advice:	Avoid multiple freeze-thaw cycles.
Storage:	-20 °C,4 °C
Storage Comment:	Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles
Expiry Date:	12 months

Publications

Product cited in:	Boccardi, Marano, Rossetti, Rizzo, di Martino, Paolisso: "Serum CD26 levels in patients with gastric cancer: a novel potential diagnostic marker." in: **BMC cancer**, Vol. 15, pp. 703, (2016) (PubMed). Violi, Loffredo, Pignatelli, Angelico, Bartimoccia, Nocella, Cangemi, Petruccioli, Monticolo, Pastori, Carnevale: "Extra virgin olive oil use is associated with improved post-prandial blood glucose and LDL cholesterol in healthy subjects." in: **Nutrition & diabetes**, Vol. 5, pp. e172, (2015) (PubMed). Garcia-Segura, Muller, Dunant: "Increase in the number of presynaptic large intramembrane particles during synaptic transmission at the Torpedo nerve-electroplaque junction." in: **Neuroscience**, Vol. 19, Issue 1, pp. 63-79, (1986) (PubMed).



ELISA

Image 1. Human CD26/DPP4 PicoKine ELISA Kit standard curve

