Datasheet for ABIN1889322

Kallikrein 6 ELISA Kit

1 Image | 1 Publication

Go to Product page

Overview

Quantity:	96 tests
Target:	Kallikrein 6 (KLK6)
Binding Specificity:	AA 22-244
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	78-5000 pg/mL
Minimum Detection Limit:	78 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human Kallikrein-6
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Cell Lysate, Serum, Plasma (heparin), Plasma (EDTA), Tissue Homogenate
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: NSO Immunogen sequence: L22-K244
Specificity:	Expression system for standard: NSO Immunogen sequence: L22-K244

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Product Details

Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.
Sensitivity:	<3pg/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:	Kallikrein 6 (KLK6)
Alternative Name:	KLK6 (KLK6 Products)
Background:	Protein Function: Serine protease which exhibits a preference for Arg over Lys in the substrate P1 position and for Ser or Pro in the P2 position. Shows activity against amyloid precursor protein, myelin basic protein, gelatin, casein and extracellular matrix proteins such as fibronectin, laminin, vitronectin and collagen. Degrades alpha-synuclein and prevents its polymerization, indicating that it may be involved in the pathogenesis of Parkinson disease and other synucleinopathies. May be involved in regulation of axon outgrowth following spinal cord injury. Tumor cells treated with a neutralizing KLK6 antibody migrate less than control cells, suggesting a role in invasion and metastasis. . Background: KLK6(Kallikrein-related peptidase 6), also called KALLIKREIN 6, NEUROSIN, PROTEASE M, ZYME or PRSS9, is a protein that in humans is encoded by the KLK6 gene. This gene is one of the fifteen kallikrein subfamily members located in a cluster on chromosome 19. The encoded enzyme is regulated by steroid hormones. Northern blot analysis revealed that the PRSS9 mRNA was expressed in several primary tumors and cell lines from mammary, prostate, and ovarian cancers, but was not detected in any metastases of these cancers. The KLK6 gene is mapped on 19q13.41. In tissue culture, the enzyme has been found to generate amyloidogenic fragments from the amyloid precursor protein, suggesting a potential for involvement in Alzheimer's disease. Upon cellular stress, neurosin was released from mitochondria to the cytosol, which resulted in the increase of degraded alpha-synuclein species. Neurosin may play a significant role in physiologic alpha-synuclein degradation and also in the pathogenesis of synucleinopathies. Synonyms: Kallikrein-6,3.4.21.-,Neurosin,Protease M,SP59,Serine protease 18,Serine protease 9,Zyme,KLK6,PRSS18, PRSS9, Full Gene Name: Kallikrein-6 Cellular Localisation: Secreted. Nucleus, nucleolus. Cytoplasm. Mitochondrion. Microsome. In

Target Details

	brain, detected in the nucleus of glial cells and in the nucleus and cytoplasm of neurons. Detected in the mitochondrial and microsomal fractions of HEK-293 cells and released into the cytoplasm following cell stress.
Gene ID:	5653
UniProt:	Q92876
Pathways:	Complement System, Regulation of G-Protein Coupled Receptor Protein Signaling

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 S1 family. Kallikrein subfamily. Tissue Specificity: In fluids, highest levels found in milk of lactating women followed by cerebrospinal fluid, nipple aspirate fluid and breast cyst fluid. Also found in serum, seminal plasma and some amniotic fluids and breast tumor cytosolic extracts. Not detected in urine. At the tissue level, highest concentrations found in glandular tissues such as salivary glands followed by lung, colon, fallopian tube, placenta, breast, pituitary and kidney. Not detected in skin, spleen, bone, thyroid, heart, ureter, liver, muscle, endometrium, testis, pancreas, seminal vesicle, ovary, adrenals and prostate. In brain, detected in gray matter neurons (at protein level). Colocalizes with pathological inclusions such as Lewy bodies and glial cytoplasmic inclusions. Overexpressed in primary breast tumors but not expressed in metastatic tumors. .
Plate:	Pre-coated
Protocol:	human Kallikrein-6 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for Kallikrein-6 has been precoated onto 96-well plates. Standards(NSO, L22-K244) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for Kallikrein-6 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 Kallikrein-6 amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 5000pg/mL, 2500pg/mL, 1250pg/mL, 625pg/mL, 312pg/mL, 156pg/mL, 78pg/mL human Kallikrein-6 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

Application Details

	properly diluted sample of human cell culture supernates, cell lysates, serum, plasma(heparin, EDTA) or tissue homogenates to each empty well. See "Sample Dilution Guideline" above for details. We recommend that each human Kallikrein-6 standard solution and each sample is measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(pg/ml): 545, Standard deviation: 37.61, CV(%): 6.9 • Sample 2: n=16, Mean(pg/ml): 1711, Standard deviation: 80.42, CV(%): 4.7 • Sample 3: n=16, Mean(pg/ml): 2903, Standard deviation: 168.4, CV(%): 5.8, • Sample 1: n=24, Mean(pg/ml): 721, Standard deviation: 55.52, CV(%): 7.7 • Sample 2: n=24, Mean(pg/ml): 1927, Standard deviation: 104.1, CV(%): 5.4 • Sample 3: n=24, Mean(pg/ml): 3120, Standard deviation: 196.6, CV(%): 6.3
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

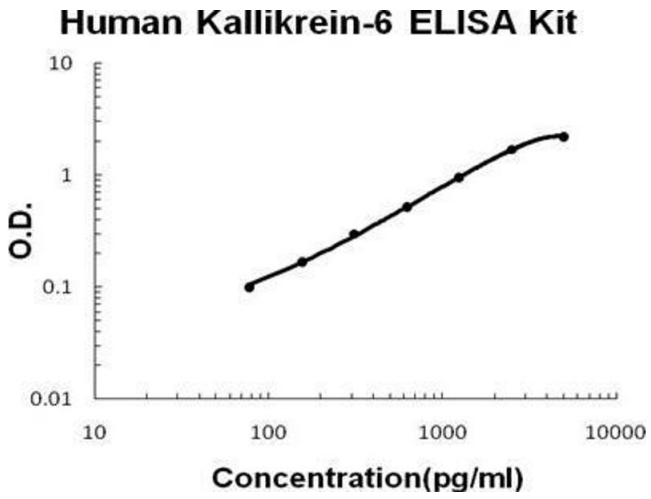
Publications

Product cited in:	Koh, Park: "Responses of inflammatory cytokines following moderate intensity walking exercise in overweight or obese individuals." in: **Journal of exercise rehabilitation**, Vol. 13, Issue 4, pp. 472-476, (2017) (PubMed). Liu, Piao, Guo, Wang, Sun, Gao, Zheng, Fang: "A New Chinese Medicine Intestine Formula Greatly Improves the Effect of Aminosalicylate on Ulcerative Colitis." in: **Evidence-based complementary and alternative medicine : eCAM**, Vol. 2017, pp. 7323129, (2017) (PubMed). Asgary, Keshvari, Sahebkar, Hashemi, Rafieian-Kopaei: "Clinical investigation of the acute effects of pomegranate juice on blood pressure and endothelial function in hypertensive individuals." in: **ARYA atherosclerosis**, Vol. 9, Issue 6, pp. 326-31, (2014) (PubMed). Shi, Song, Zhang, Li, Li: "Correlation between the microinflammatory state and left ventricular structural and functional changes in maintenance haemodialysis patients." in: **Experimental and therapeutic medicine**, Vol. 6, Issue 2, pp. 532-536, (2013) (PubMed).

Publications

Iori, Vinci, Murphy, Marescotti, Avogaro, Ahluwalia: "Glucose and fatty acid metabolism in a 3 tissue in-vitro model challenged with normo- and hyperglycaemia." in: **PLoS ONE**, Vol. 7, Issue 4, pp. e34704, (2012) (PubMed).

Images



ELISA

Image 1. Human Kallikrein-6 PicoKine ELISA Kit standard curve