Datasheet for ABIN1672856

Endothelin 1 ELISA Kit

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Overview

Quantity:	96 tests
Target:	Endothelin 1 (EDN1)
Binding Specificity:	AA 53-73
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	3.9-250 pg/mL
Minimum Detection Limit:	3.9 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human Endothelin
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: human peptide Immunogen sequence: C53-W73
Specificity:	Expression system for standard: human peptide Immunogen sequence: C53-W73
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Predicted Reactivity:	Hamster
Sensitivity:	<0.5pg/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:	Endothelin 1 (EDN1)
Alternative Name:	EDN1 (EDN1 Products)
Background:	Protein Function: Endothelins are endothelium-derived vasoconstrictor peptides. Background: The endothelins is a family of structurally and pharmacologically distinct peptides, which has been identified and sequenced in humans. Three isoforms of human endothelin have been identified: endothelin-1, -2, and -3. Endothelin-1 is a potent, 21-amino acid vasoconstrictor peptide produced by vascular endothelial cells. Endothelins are 21-amino acid vasoconstricting peptides produced primarily in the endothelium having a key role in vascular homeostasis. Endothelins are implicated in vascular diseases of several organ systems, including the heart, general circulation and brain. Endothelins are proteins that constrict blood vessels and raise blood pressure. They are normally kept in balance by other mechanisms, but when they are over-expressed, they contribute to high blood pressure(hypertension) and heart disease. Synonyms: Endothelin-1,Preproendothelin-1,PPET1,Endothelin-1,ET-1,Big endothelin-1,EDN1, Full Gene Name: Endothelin-1 Cellular Localisation: Secreted.
Gene ID:	1906
UniProt:	P05305
Pathways:	Hormone Transport, Negative Regulation of Hormone Secretion, Regulation of Systemic Arterial Blood Pressure by Hormones, cAMP Metabolic Process, Regulation of Muscle Cell Differentiation, Regulation of G-Protein Coupled Receptor Protein Signaling, Regulation of Cell Size

Application Details

Application Notes:	Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well

Application Details

	assay was recommended for both standard and sample testing.
Comment:	Sequence similarities: Belongs to the endothelin/sarafotoxin family. Tissue Specificity: Expressed in lung, placental stem villi vessels and in cultured placental vascular smooth muscle cells. .
Plate:	Pre-coated
Protocol:	human Endothelin ELISA Kit is based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for Endothelin has been precoated onto 96-well plates. Standards(human peptide, C53-W73) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for Endothelin is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex is added and unbound conjugates are washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB is 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 Endothelin amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 250pg/mL, 125pg/mL, 62.5pg/mL, 31.2pg/mL, 16.5pg/mL, 7.8pg/mL, 3.9pg/mL human Endothelin 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 supernatants, serum or plasma(heparin, EDTA) to each empty well. See "Sample Dilution Guideline" above for details. We recommend that each human Endothelin standard solution and each sample is measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(pg/ml): 25.1, Standard deviation: 1.41, CV(%): 5.6 • Sample 2: n=16, Mean(pg/ml): 85.4, Standard deviation: 3.76, CV(%): 4.4 • Sample 3: n=16, Mean(pg/ml): 146, Standard deviation: 8.03, CV(%): 5.5, • Sample 1: n=24, Mean(pg/ml): 23.2, Standard deviation: 1.79, CV(%): 7.7 • Sample 2: n=24, Mean(pg/ml): 84.3, Standard deviation: 6.07, CV(%): 7.2 • Sample 3: n=24, Mean(pg/ml): 143, Standard deviation: 8.72, CV(%): 6.1
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

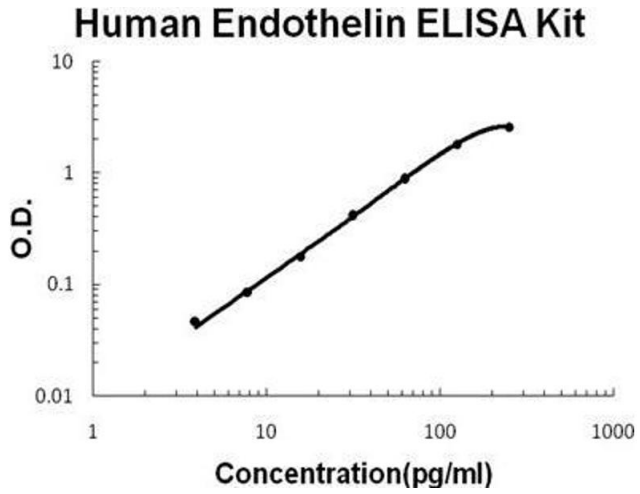
Handling

Expiry Date:	12 months

Publications

Product cited in:	Liu, Zhu, Zhou, Wei, Long, Chen, Ling, Ge, Zhuo: "Endoplasmic reticulum stress promotes amyloid-beta peptides production in RGC-5 cells." in: **Cell stress & chaperones**, Vol. 19, Issue 6, pp. 827-35, (2014) (PubMed). Peng, Dai, Ji, Dai: "The separate roles of endothelin receptors participate in remodeling of matrix metalloproteinase and connexin 43 of cardiac fibroblasts in maladaptive response to isoproterenol." in: **European journal of pharmacology**, Vol. 634, Issue 1-3, pp. 101-6, (2010) (PubMed).

Images



ELISA

Image 1. Human Endothelin PicoKine ELISA Kit standard curve