Datasheet for ABIN411305

IL-8 ELISA Kit

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Overview

Quantity:	96 tests
Target:	IL-8 (IL8)
Binding Specificity:	AA 28-99
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	15.6-1000 pg/mL
Minimum Detection Limit:	15.6 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human IL-8
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA), Plasma (citrate)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: E.coli Immunogen sequence: S28-S99
Specificity:	Expression system for standard: E.coli Immunogen sequence: S28-S99
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity:	<1pg/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:	IL-8 (IL8)
Alternative Name:	CXCL8 (IL8 Products)
Background:	Protein Function: IL-8 is a chemotactic factor that attracts neutrophils, basophils, and T-cells, but not monocytes. It is also involved in neutrophil activation. It is released from several cell types in response to an inflammatory stimulus. IL-8(6-77) has a 5-10-fold higher activity on neutrophil activation, IL-8(5-77) has increased activity on neutrophil activation and IL-8(7-77) has a higher affinity to receptors CXCR1 and CXCR2 as compared to IL-8(1-77), respectively. . Background: Interleukin-8, also called neutrophil-activating peptide-1 or SCYB8, is a tissue-derived peptide secreted by several types of cells in response to inflammatory stimuli. Monocyte-derived neutrophil chemotactic factor(MDNCF/IL-8, suggested gene symbol IL8) is a cytokine that chemoattracts and activates neutrophils. IL-8 is produced and released from human adipose tissue and from isolated adipocytes in vitro, which may indicate that IL-8 from adipose tissue could be involved in some of the obesity-related complications. The MDNCF/IL-8 gene is placed on the human gene map at position 4q12-q21. This is the same location where at least three other members(platelet factor 4, melanoma growth stimulatory activity, and interferon-gamma induced factor) of the platelet factor 4 gene superfamily reside. Human IL-8 consists of 99 amino acids in precursor form and 79 amino acids in mature form. Synonyms: Interleukin-8,IL-8,C-X-C motif chemokine 8,Chemokine (C-X-C motif) ligand 8,Emoctakin,Granulocyte chemotactic protein 1,GCP-1,Monocyte-derived neutrophil chemotactic factor,MDNCF,Monocyte-derived neutrophil-activating peptide,MONAP,Neutrophil-activating protein 1,NAP-1,Protein 3-10C,T-cell chemotactic factor,MDNCF-a,GCP/IL-8 protein IV,IL8/NAP1 form I,Interleukin-8,(Ala-IL-8)77,GCP/IL-8 protein II,IL-8(1-77),IL8/NAP1 form II,MDNCF-b,IL-8(5-77),IL-8(6-77),(Ser-IL-8)72,GCP/IL-8 protein I,IL8/NAP1 form III,Lymphocyte-derived neutrophil-activating factor,LYNAP,MDNCF-c,Neutrophil-activating factor,NAF,IL-8(7-77),GCP/IL-8 protein V,IL8/NAP1 form IV,IL-8(8-77),GCP/IL-8 protein VI,IL8/NAP1 form V,IL-8(9-77),GCP/IL-8 protein III,IL8/NAP1 form VI,CXCL8,IL8, Full Gene Name: Interleukin-8

Target Details

	Cellular Localisation: Secreted.
Gene ID:	3576
UniProt:	P10145
Pathways:	TLR Signaling, Cellular Response to Molecule of Bacterial Origin, Regulation of G-Protein Coupled Receptor Protein Signaling, ER-Nucleus Signaling, Hepatitis C, Autophagy

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 intercrine alpha (chemokine CxC) family.
Plate:	Pre-coated
Protocol:	human IL-8 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for IL-8 has been precoated onto 96-well plates. Standards(E.coli, S28-S99) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for IL-8 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 IL-8 amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL, 31.2pg/mL, 15.6pg/mL human IL-8 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 or plasma(heparin, EDTA, citrate) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human IL-8 standard solution and each sample be measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(pg/ml): 115, Standard deviation: 6.67, CV(%): 5.8 • Sample 2: n=16, Mean(pg/ml): 357, Standard deviation: 17.5, CV(%): 4.9 • Sample 3: n=16, Mean(pg/ml): 616, Standard deviation: 41.3, CV(%): 6.7, • Sample 1: n=24, Mean(pg/ml): 176, Standard deviation: 13.38, CV(%): 7.6 • Sample 2: n=24, Mean(pg/ml): 392, Standard deviation: 21.17, CV(%): 5.4 • Sample 3: n=24, Mean(pg/ml): 649, Standard deviation: 45.43, CV(%): 7

Application Details

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:

Wang, Lv, Zhang, Liu, Yang, Guan, Hong: "FOXQ1 regulates senescence-associated inflammation via activation of SIRT1 expression." in: **Cell death & disease**, Vol. 8, Issue 7, pp. e2946, (2018) (PubMed).

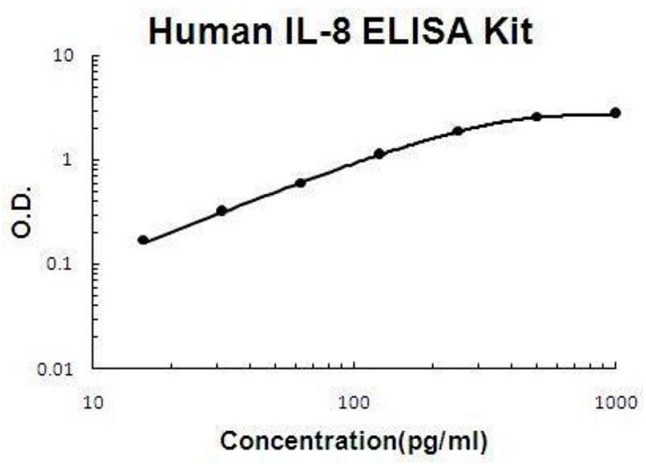
Huang, Xu, Zhou, Lin, Zhang, Zhang, Pan, Tao, Liu, Shen et al.: "Essential Oil from Fructus Alpiniae Zerumbet Protects Human Umbilical Vein Endothelial Cells In Vitro from Injury Induced by High Glucose Levels by Suppressing Nuclear Transcription Factor-Kappa B ..." in: **Medical science monitor : international medical journal of experimental and clinical research**, Vol. 23, pp. 4760-4767, (2018) (PubMed).

Sun, Shi, Zheng, Min, Yang, Li, Liao, Huang, Zhang, Xu, Zhu, Cui, Liu: "Senescence-associated secretory factors induced by cisplatin in melanoma cells promote non-senescent melanoma cell growth through activation of the ERK1/2-RSK1 pathway." in: **Cell death & disease**, Vol. 9, Issue 3, pp. 260, (2018) (PubMed).

Bai, Wei, Wu, Wei, Wang, Bai: "C/EBP β Mediates Endoplasmic Reticulum Stress Regulated Inflammatory Response and Extracellular Matrix Degradation in LPS-Stimulated Human Periodontal Ligament Cells." in: **International journal of molecular sciences**, Vol. 17, Issue 3, pp. 385, (2017) (PubMed).

Irtegun, Pektanc, Akkurt, Bozkurt, Turkcu, Kalkanli-Tas: "Pharmacological Inactivation of Src Family Kinases Inhibits LPS-Induced TNF-α Production in PBMC of Patients with Behçet's Disease." in: **Mediators of inflammation**, Vol. 2016, pp. 5414369, (2017) (PubMed).

There are more publications referencing this product on: Product page



ELISA

Image 1. Human IL-8 PicoKine ELISA Kit standard curve