Datasheet for ABIN2859317

S100A12 ELISA Kit

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Overview

Quantity:	96 tests
Target:	S100A12
Binding Specificity:	AA 1-92
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	312-20.000 pg/mL
Minimum Detection Limit:	312 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human S100A12
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: E.coli Immunogen sequence: M1-E92
Specificity:	E.coli, M1-E92
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.
Sensitivity:	<10pg/mL

Product Details

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:	S100A12
Alternative Name:	S100A12 (S100A12 Products)
Background:	Protein Function: S100A12 is a calcium-, zinc- and copper-binding protein which plays a prominent role in the regulation of inflammatory processes and immune response. Its proinflammatory activity involves recruitment of leukocytes, promotion of cytokine and chemokine production, and regulation of leukocyte adhesion and migration. Acts as an alarmin or a danger associated molecular pattern (DAMP) molecule and stimulates innate immune cells via binding to receptor for advanced glycation endproducts (AGER). Binding to AGER activates the MAP-kinase and NF-kappa-B signaling pathways leading to production of proinflammatory cytokines and up-regulation of cell adhesion molecules ICAM1 and VCAM1. Acts as a monocyte and mast cell chemoattractant. Can stimulate mast cell degranulation and activation which generates chemokines, histamine and cytokines inducing further leukocyte recruitment to the sites of inflammation. Can inhibit the activity of matrix metalloproteinases, MMP2, MMP3 and MMP9 by chelating Zn(2+) from their active sites. Possesses filariacidal and filariastatic activity. Calcitermin possesses antifungal activity against C.albicans and is also active against E.coli and P.aeruginosa but not L.monocytogenes and S.aureus. . Background: S100 calcium-binding protein A12 (S100A12) is a protein that in humans is encoded by the S100A12 gene. It is also known as calgranulin C. By direct R-banding FISH, the S100A12 gene is mapped to chromosome 1q21.2-q22. The protein encoded by this gene is a member of the S100 family of proteins containing 2 EF-hand calcium-binding motifs. S100 proteins are localized in the cytoplasm and/or nucleus of a wide range of cells, and involved in the regulation of a number of cellular processes such as cell cycle progression and differentiation. S100 genes include at least 13 members which are located as a cluster on chromosome 1q21. And this protein is proposed to be involved in specific calcium-dependent signal transduction pathways and its regulatory effect on cytoskeletal components may modulate various neutrophil activities. Synonyms: Protein S100-A12,CGRP,Calcium-binding protein in amniotic fluid 1,CAAF1,Calgranulin-C,CAGC,Extracellular newly identified RAGE-binding protein,EN-RAGE,Migration inhibitory factor-related protein 6,MRP-6,p6,Neutrophil S100 protein,S100

Target Details

	calcium-binding protein A12,Calcitermin,S100A12, Full Gene Name: Protein S100-A12 Cellular Localisation: Secreted . Cytoplasm . Cytoplasm, cytoskeleton . Cell membrane, Peripheral membrane protein . Predominantly localized in the cytoplasm. Upon elevation of the intracellular calcium level, translocated from the cytoplasm to the cytoskeleton and the cell membrane. Upon neutrophil activation is secreted via a microtubule-mediated, alternative pathway.
Gene ID:	6283
UniProt:	P80511
Pathways:	Toll-Like Receptors Cascades, S100 Proteins

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:	Tissue Specificity: Predominantly expressed by neutrophils, monocytes and activated macrophages. Expressed by eosinophils and macrophages in asthmatic airways in regions where mast cells accumulate. Found in high concentrations in the serum of patients suffering from various inflammatory disorders, such as rheumatoid arthritis, psoriatic arthritis, Crohn's disease, ulcerative colitis, and Kawasaki disease.
Plate:	Pre-coated
Protocol:	human S100A12 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for S100A12 has been precoated onto 96-well plates. Standards(E.coli,M1-E92) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for S100A12 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 S100A12 amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 20,000pg/mL, 10,000pg/mL, 5000pg/mL, 2500pg/mL, 1250pg/mL, 625pg/mL, 312pg/mL human S100A12 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,

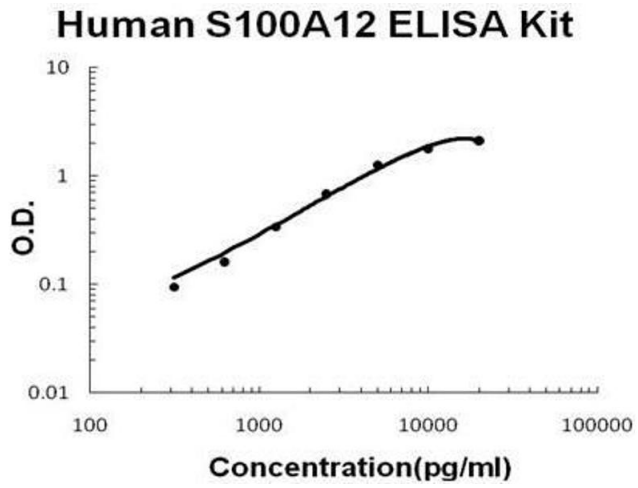
Application Details

	EDTA) to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human S100A12 standard solution and each sample be measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(ng/ml): 0.49, Standard deviation: 0.002, CV(%): 5.1 • Sample 2: n=16, Mean(ng/ml): 1.66, Standard deviation: 0.097, CV(%): 5.9 • Sample 3: n=16, Mean(ng/ml): 8.37, Standard deviation: 0.451, CV(%): 5.4, • Sample 1: n=24, Mean(ng/ml): 0.41, Standard deviation: 0.022, CV(%): 5.4 • Sample 2: n=24, Mean(ng/ml): 1.89, Standard deviation: 0.113, CV(%): 6.0 • Sample 3: n=24, Mean(ng/ml): 7.14, Standard deviation: 0.414, CV(%): 5.8
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

Images



ELISA

Image 1. Human S100A12 PicoKine ELISA Kit standard curve