

Datasheet for ABIN1672875

CHI3L1 ELISA Kit



[Go to Product page](#)

1 Image

Overview

Quantity:	96 tests
Target:	CHI3L1
Binding Specificity:	AA 22-383
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	62.5-4000 pg/mL
Minimum Detection Limit:	62.5 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human Chitinase 3-like 1/YKL-40
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA), Urine
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: NSO Immunogen sequence: Y22-T383
Specificity:	Expression system for standard: NSO Immunogen sequence: Y22-T383

Product Details

Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.
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:	CHI3L1
Alternative Name:	CHI3L1 (CHI3L1 Products)
Target Type:	Viral Protein
Background:	<p>Protein Function: Carbohydrate-binding lectin with a preference for chitin. Has no chitinase activity. May play a role in tissue remodeling and in the capacity of cells to respond to and cope with changes in their environment. Plays a role in T-helper cell type 2 (Th2) inflammatory response and IL-13-induced inflammation, regulating allergen sensitization, inflammatory cell apoptosis, dendritic cell accumulation and M2 macrophage differentiation. Facilitates invasion of pathogenic enteric bacteria into colonic mucosa and lymphoid organs. Mediates activation of AKT1 signaling pathway and subsequent IL8 production in colonic epithelial cells. Regulates antibacterial responses in lung by contributing to macrophage bacterial killing, controlling bacterial dissemination and augmenting host tolerance. Also regulates hyperoxia-induced injury, inflammation and epithelial apoptosis in lung. .</p> <p>Background: Chitinase-3-like protein 1, also called CHI3L1 or YKL-40 is a secreted glycoprotein that is approximately 40 kDa in size that in humans is encoded by the CHI3L1 gene. This gene is mapped to 1q32.1. Chitinases catalyze the hydrolysis of chitin, which is an abundant glycopolymer found in insect exoskeletons and fungal cell walls. The glycoside hydrolase 18 family of chitinases includes eight human family members. This gene encodes a glycoprotein member of the glycosyl hydrolase 18 family. The protein lacks chitinase activity and is secreted by activated macrophages, chondrocytes, neutrophils and synovial cells. The protein is thought to play a role in the process of inflammation and tissue remodeling.</p> <p>Synonyms: Chitinase-3-like protein 1,39 kDa synovial protein, Cartilage glycoprotein 39, CGP-39, GP-39, hCGP-39, YKL-40, CHI3L1,</p> <p>Full Gene Name: Chitinase-3-like protein 1</p> <p>Cellular Localisation: Secreted, extracellular space . Cytoplasm . Cytoplasm, perinuclear region .</p>

Target Details

Endoplasmic reticulum.

Gene ID: 1116

UniProt: [P36222](#)

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 glycosyl hydrolase 18 family.
Tissue Specificity: Present in activated macrophages, articular chondrocytes, synovial cells as well as in liver. Very low or undetectable expression in non-inflammatory colon. Undetectable in muscle tissues, lung, pancreas, mononuclear cells, or fibroblasts. .

Plate: Pre-coated

Protocol: human Chitinase 3-like 1 ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for Chitinase 3-like 1 has been precoated onto 96-well plates. Standards(NSO, Y22-T383) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for Chitinase 3-like 1 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 Chitinase 3-like 1 amount of sample captured in plate.

Assay Procedure: Aliquot 0.1 mL per well of the 4000pg/mL, 2000pg/mL, 1000pg/mL, 500pg/mL, 250pg/mL, 125pg/mL, 62.5pg/mL human Chitinase 3-like 1 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) or urine to each empty well. See "Sample Dilution Guideline" above for details. We recommend that each human Chitinase 3-like 1 standard solution and each sample is measured in duplicate.

Assay Precision:

- Sample 1: n=16, Mean(pg/ml): 562, Standard deviation: 28.7, CV(%): 5.1
- Sample 2: n=16, Mean(pg/ml): 1059, Standard deviation: 51.9, CV(%): 4.9
- Sample 3: n=16, Mean(pg/ml): 2325, Standard deviation: 123, CV(%): 5.3,
- Sample 1: n=24, Mean(pg/ml): 643, Standard deviation: 43.1, CV(%): 6.7

Application Details

- Sample 2: n=24, Mean(pg/ml): 1124, Standard deviation: 71.9, CV(%): 6.4
- Sample 3: n=24, Mean(pg/ml): 2239, Standard deviation: 165, CV(%): 7.4

Restrictions: For Research Use only

Handling

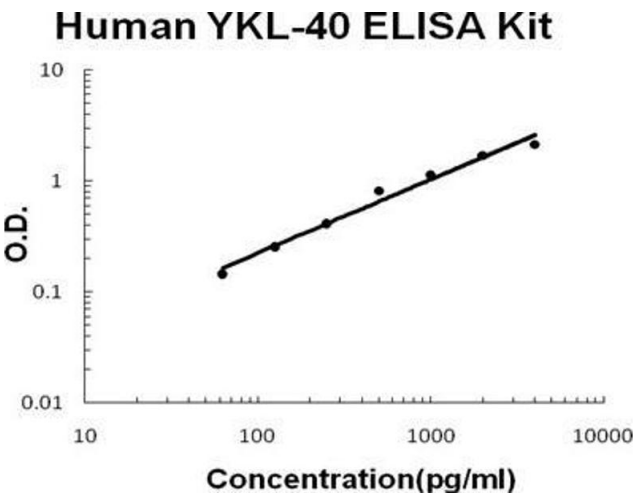
Handling Advice: Avoid multiple freeze-thaw cycles.

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 Chitinase 3-like 1/YKL-40 PicoKine ELISA Kit standard curve