Biotin Conjugated Anti-Human YKL-40 Antibody [PSH13-09] - Detector

HA725090B

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Det), ELISA
Clone number:	PSH13-09

Description: 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.

Conjugate: Biotin-conjugated

Immunogen: Recombinant protein within Human YKL-40 aa 22-383 (HA211030).

Positive control: Recombinant Human YKL-40 protein (HA211030).

Subcellular location: Secreted, extracellular space, Cytoplasm, perinuclear region, Endoplasmic reticulum.

Database links: SwissProt: P36222 Human

Recommended Dilutions:

ELISA(Det) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH13-08] to Human YKL-40 antibody (Capture) (HA725088) and Recombinant Human YKL-40 protein (HA211030) as the standard. The reference range value is 31.3-4,000 pg/ml.

ELISA Use at an assay dependent concentration.

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% ProClin300.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

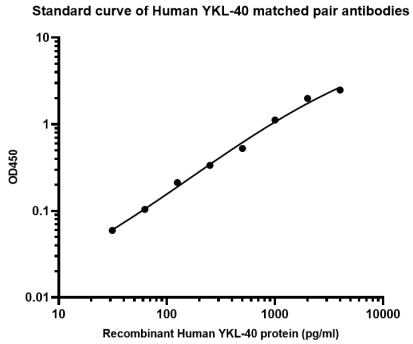

Fig1: Sandwich ELISA analysis of Human YKL-40 matched pair antibodies

Capture: HA725088, Human YKL-40 Rabbit mAb [PSH13-08]
Detector: HA725089, Human YKL-40 Rabbit mAb [PSH13-09]

Elisa assay was performed by coating wells of a 96-well plate with 100 µl per well of capture antibody (HA725088) diluted in carbonate/bicarbonate buffer, at a concentration of 5 µg/mL overnight at 4℃. Wells of the plate were washed, blocked with 150 µl 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Recombinant Human YKL-40 protein (HA211030) starting from 4,000 pg/ml to 0 pg/ml and detect antibody (HA725089, Biotin, 0.2 µg/ml) for 1 hour at 30℃ with shaking. Then the plate was washed and incubated with 100 µl per well of SA-HRP for 0.5 hour at 30℃ with shaking. Detection was performed using an Ultra TMB Substrate for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

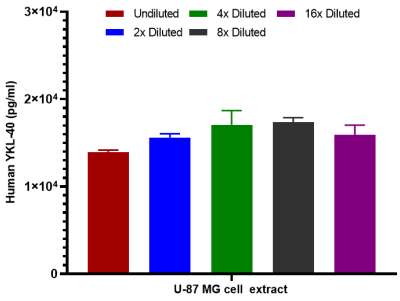

Fig2: Interpolated concentrations of native YKL-40 in U87 MG extract samples based on a 1000 µg/ml extract load.

Capture: HA725088, Human YKL-40 Rabbit mAb [PSH13-08]
Detector: HA725089, Human YKL-40 Rabbit mAb [PSH13-09]

Interpolated concentration of native YKL-40 was measured in duplicate at different sample concentrations. The interpolated dilution factor corrected values were plotted (mean +/- SD, n=2). The mean YKL-40 concentration was determined to be 15973 pg/mL in U-87 MG cell extract.

Background References

1. Connolly K et al. Potential role of chitinase-3-like protein 1 (CHI3L1/YKL-40) in neurodegeneration and Alzheimer's disease. Alzheimers Dement. 2023 Jan
2. Yu JE et al. Significance of chitinase-3-like protein 1 in the pathogenesis of inflammatory diseases and cancer. Exp Mol Med. 2024 Feb