Anti-Human/Monkey TIMP4 Antibody [PSH21-50] - BSA and Azide free (Detector)

HA724221

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Rhesus monkey
Applications:	ELISA(Det)
Clone number:	PSH21-50

Description: Metalloproteinase inhibitor 4 is an enzyme that in humans is encoded by the TIMP4 gene. This gene belongs to the tissue inhibitor of metalloproteinases gene family. The proteins encoded by this gene family are inhibitors of the matrix metalloproteinases, a group of peptidases involved in degradation of the extracellular matrix. The secreted, netrin domain-containing protein encoded by this gene is involved in regulation of platelet aggregation and recruitment and may play role in hormonal regulation and endometrial tissue remodeling.

Immunogen: Recombinant protein within Recombinant Human TIMP4 aa 30-224 (HA211288).

Positive control: Recombinant Human TIMP4 protein (HA211288).

Subcellular location: Secreted.

Database links: SwissProt: Q99727 Human

Recommended Dilutions:

ELISA(Det) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH21-49] to Human/Monkey TIMP4 antibody (Capture) (HA724220) and Recombinant Human TIMP4 protein (HA211288) as the standard. The reference range value is 15.6-4,000 pg/mL.

Storage Buffer: 1*PBS (pH7.4).

Storage Instruction: Store at 2-8℃. Avoid freeze.

Purity: Protein A affinity purified.

Images

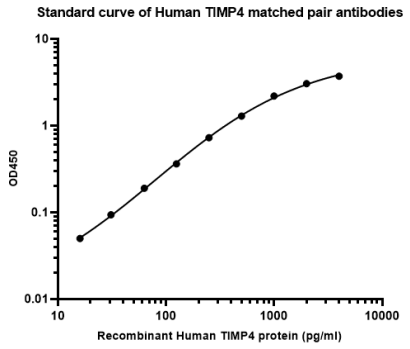

Fig1: Sandwich ELISA analysis of Human TIMP4 matched pair antibodies

Capture: HA724220, Human/Monkey TIMP4 Rabbit mAb [PSH21-49]
Detector: HA724221, Human/Monkey TIMP4 Rabbit mAb [PSH21-50]

Elisa assay was performed by coating wells of a 96-well plate with 100 µl per well of capture antibody (HA724220) diluted in carbonate/bicarbonate buffer, at a concentration of 5ug/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 TIMP4 protein (HA211288) starting from 4000 pg/ml to 0 pg/ml and detect antibody (HA724221, 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.

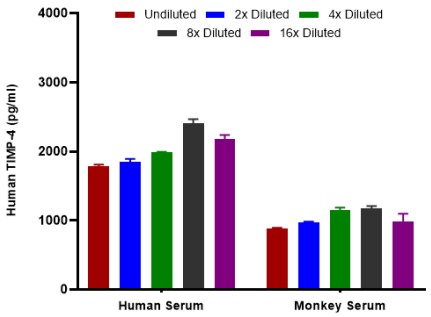

Fig2: Interpolated concentrations of native TIMP-4 in human and monkey samples.

Capture: HA724220, Human/Monkey TIMP4 Rabbit mAb [PSH21-49]
Detector: HA724221, Human/Monkey TIMP4 Rabbit mAb [PSH21-50]

Interpolated concentration of native TIMP-4 was measured in duplicate at different sample concentrations and interpolated from the TIMP-4 standard curves. Undiluted samples were 100% serum. The interpolated dilution factor corrected values were plotted (mean +/- SD, n=2). The mean TIMP-4 concentration was determined to be 2,043 pg/mL in human serum and 1,031 pg/mL in monkey serum.

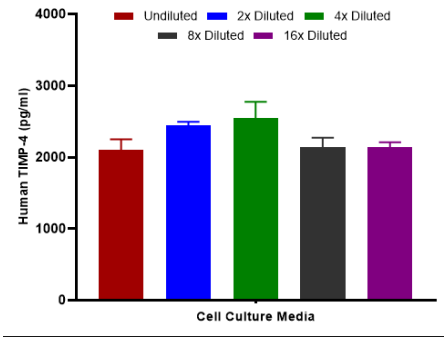

Fig3: Interpolated concentrations of spiked TIMP-4 in cell culture media samples.

Capture: HA724220, Human/Monkey TIMP4 Rabbit mAb [PSH21-49]
Detector: HA724221, Human/Monkey TIMP4 Rabbit mAb [PSH21-50]

The concentrations of TIMP-4 were measured in duplicates, interpolated from the TIMP-4 standard curves and corrected for sample dilution. Diluted samples are as follows: 50% cell culture media with FBS. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2).

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Zhou L et al. TIMP4 serves as a novel potential prognostic biomarker for oral squamous cell carcinoma. Sci Rep. 2025 Feb
2. Zhou W et al. Defect of TIMP4 Is Associated with High Myopia and Participates in Rat Ocular Development in a Dose-Dependent Manner. Int J Mol Sci. 2023 Nov