

Anti-Human ADAM17 Antibody [PSH28-41] - BSA and Azide free (Capture)

HA725421



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Cap)
Clone number:	PSH28-41

Description: A disintegrin and metalloprotease 17 (ADAM17), also called TACE (tumor necrosis factor- α -converting enzyme), is an 824-amino acid polypeptide that belongs to the ADAM protein family of disintegrins and metalloproteases. ADAM17 is understood to be involved in the processing of tumor necrosis factor alpha (TNF- α) at the surface of the cell, and from within the intracellular membranes of the trans-Golgi network. This process, which is also known as 'shedding', involves the cleavage and release of a soluble ectodomain from membrane-bound pro-proteins (such as pro-TNF- α), and is of known physiological importance. ADAM17 was the first 'shedase' to be identified, and is also understood to play a role in the release of a diverse variety of membrane-anchored cytokines, cell adhesion molecules, receptors, ligands, and enzymes.

Immunogen: Recombinant protein within Human ADAM17 aa 18-671 (HA211625).

Positive control: Recombinant Human ADAM17 protein (HA211625).

Subcellular location: Cell membrane.

Database links: SwissProt: P78536 Human

Recommended Dilutions:

ELISA(Cap) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH28-42] to Human ADAM17 (Detecor) (HA725422) and Recombinant Human ADAM17 protein (HA211625) as the standard. The reference range value is 156.3-5,000 pg/mL.

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

Storage Instruction: Store at 2-8°C. Avoid freeze.

Purity: Protein A affinity purified.

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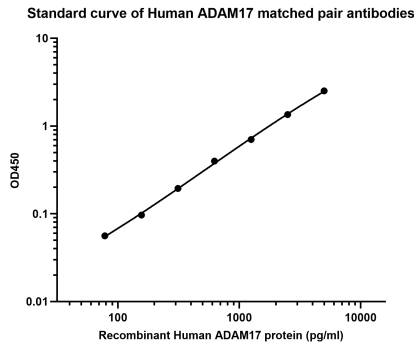
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Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

Images

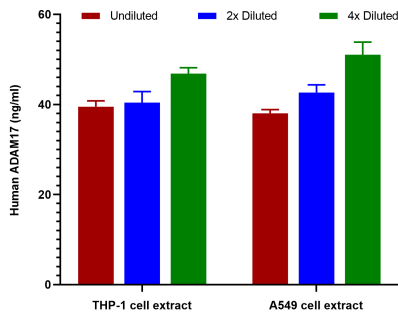
Fig1: Sandwich ELISA analysis of Human ADAM17 protein matched pair antibodies

Capture: HA725421, Human ADAM17 Rabbit mAb [PSH28-41]
Detector: HA725422, Human ADAM17 Rabbit mAb [PSH28-42]



Elisa assay was performed by coating wells of a 96-well plate with 100 μ l per well of capture antibody (HA725421) diluted in carbonate/bicarbonate buffer, at a concentration of 2 μ g/mL overnight at 4 $^{\circ}$ C. Wells of the plate were washed, blocked with 150 μ l 0.05% tween-20 1% BSA blocking buffer, and incubated with serial diluted Recombinant Human ADAM17 protein (HA211625) starting from 8,000 pg/mL to 0 pg/mL and detect antibody (HA725422, Biotin, 0.5 μ g/mL) for 1 hour at 30 $^{\circ}$ C with shaking. Then the plate was washed and incubated with 100 μ l per well of SA-HRP for 0.5 hour at 30 $^{\circ}$ C 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 ADAM17 in THP-1 cell extract and A549 cell extract



Capture: HA725421, Human ADAM17 Rabbit mAb [PSH28-41]
Detector: HA725422, Human ADAM17 Rabbit mAb [PSH28-42]

The concentrations of ADAM17 were measured in duplicates, interpolated from the ADAM17 standard curve and corrected for sample dilution. Undiluted samples are THP-1 cell extract 2 mg/mL and A549 cell extract 2 mg/mL. The interpolated dilution factor corrected values are plotted (mean $\pm$ SD, n=2). The mean ADAM17 concentration was determined to be 42.26 ng/mL in THP-1 cell extract and 43.92 ng/mL in A549 cell extract.

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

Background References

1. Xie L et al. Cardiomyocyte-specific knockout of ADAM17 alleviates doxorubicin-induced cardiomyopathy via inhibiting TNFalpha-TRAF3-TAK1-MAPK axis. Signal Transduct Target Ther. 2024 Oct
2. Wang X et al. ADAM17 variant causes hair loss via ubiquitin ligase TRIM47-mediated degradation. JCI Insight. 2024 May

Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation