

Anti-Human Angiogenin Antibody [PSH12-65] - BSA and Azide free (Detector)

HA725077



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Det)
Clone number:	PSH12-65

Description: The protein encoded by this gene is a member of the RNase A superfamily though it has relatively weak ribonucleolytic activity. This protein is a potent mediator of new blood vessel formation and thus, in addition to the name RNase5, is commonly called angiogenin. This protein induces angiogenesis after binding to actin on the surface of endothelial cells. This protein also accumulates at the nucleolus where it stimulates ribosomal transcription. Under stress conditions this protein translocates to the cytosol where it hydrolyzes cellular tRNAs and influences protein synthesis. A signal peptide is cleaved from the precursor protein to produce a mature protein which contains a nuclear localization signal, a cell binding motif, and a catalytic domain. This protein has been shown to be both neurotrophic and neuroprotective and the mature protein has antimicrobial activity against some bacteria and fungi, including *S. pneumoniae* and *C. albicans*. Due to its effect on rRNA production and angiogenesis this gene plays important roles in cell growth and tumor progression. Mutations in this gene are associated with progression of amyotrophic lateral sclerosis (ALS). This gene and the neighboring RNase4 gene share promoters and 5' exons though each gene then splices to a distinct 3' exon containing the complete coding region of each gene. Alternative splicing results in multiple transcript variants encoding the same protein.

Immunogen: Recombinant protein within Human Angiogenin aa 24-147 (HA210986).

Positive control: Recombinant Human Angiogenin protein (HA210986).

Subcellular location: Secreted.

Database links: SwissProt: P03950 Human

Recommended Dilutions:

ELISA(Det) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH12-64] to Human Angiogenin antibody (Capture) (HA725076) and Recombinant Human Angiogenin protein (HA210986) as the standard. The reference range value is 23.4-3,000 pg/mL.

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

Storage Instruction: Store at +4°C after thawing. Aliquot store at -20°C. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

Service mail:support@huabio.cn

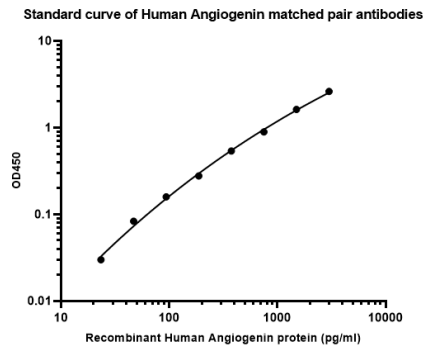
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Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

Images

Fig1: Sandwich ELISA analysis of human Angiogenin matched pair antibodies

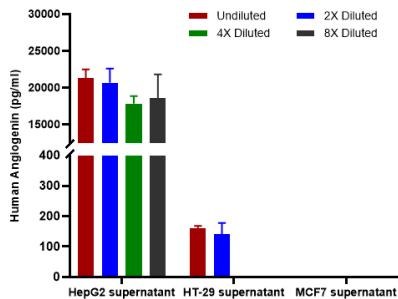
Capture: HA725076, Human Angiogenin Rabbit mAb [PSH12-64]
Detector: HA725077, Human Angiogenin Rabbit mAb [PSH12-65]



Elisa assay was performed by coating wells of a 96-well plate with 50 μ l per well of capture antibody (HA725076) 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 Angiogenin protein (HA210986) starting from 3,000 pg/ml to 0 pg/ml and detect antibody (HA725077, Biotin, 0.05 μ g/ml) for 1 hour at 30 $^{\circ}$ C with shaking. Then the plate was washed and incubated with 50 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 Angiogenin in HepG2, HT-29 and MCF7 cell culture supernatant.

Capture: HA725076, Human Angiogenin Rabbit mAb [PSH12-64]
Detector: HA725077, Human Angiogenin Rabbit mAb [PSH12-65]



The concentrations of Angiogenin were measured in duplicates, interpolated from the Angiogenin standard curve and corrected for sample dilution. Undiluted samples are HepG2 cell culture supernatant 2.5%, HT-29 cell culture supernatant 100% and MCF7 cell culture supernatant 50%. The interpolated dilution factor corrected values are plotted (mean $\pm$ SD, n=2). The mean Angiogenin concentration was determined to be 19,596 pg/ml in HepG2 cell culture supernatant, 151 pg/ml in HT-29 cell culture supernatant and undetectable in MCF7 cell culture supernatant.

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

Background References

1. Bai R., Sun D., Chen M., Shi X., Luo L., Yao Z., Liu Y., Ge X., Gao X., Hu G.F., Zhou W., Sheng J., Xu Z. Myeloid cells protect intestinal epithelial barrier integrity through the angiogenin/plexin-B2 axis. *EMBO J.* 39:e103325-e103325 (2020)
2. Thomas S.P., Hoang T.T., Ressler V.T., Raines R.T. Human angiogenin is a potent cytotoxin in the absence of ribonuclease inhibitor. *RNA* 24:1018-1027 (2018)

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