

Anti-Human GRN Antibody [PSH22-42] - BSA and Azide free (Capture)

HA725309



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	ELISA(Cap)
Clone number:	PSH22-42

Description: Granulin is a protein that in humans is encoded by the GRN gene. Each granulin protein is cleaved from the precursor progranulin, a 593 amino-acid-long and 68.5 kDa protein. While the function of progranulin and granulin have yet to be determined, both forms of the protein have been implicated in development, inflammation, cell proliferation and protein homeostasis. The 2006 discovery of the GRN mutation in a population of patients with frontotemporal dementia has spurred much research in uncovering the function and involvement in disease of progranulin in the body. While there is a growing body of research on progranulin's role in the body, studies on specific granulin residues are still limited. Progranulin is the precursor protein for granulin. Cleavage of progranulin produces a variety of active 6 kDa granulin peptides. These smaller cleavage products are named granulin A, granulin B, granulin C, etc. Epithelins 1 and 2 are synonymous with granulins A and B, respectively. Cleavage of progranulin into granulin occurs either in the extracellular matrix or the lysosome. Elastase, proteinase 3 and matrix metalloproteinase are proteases capable of cleaving progranulin into individual granulin peptides. Progranulin and granulin can be further differentiated by their hypothesized opposing roles in the cell. While progranulin is associated with anti-inflammation, cleaved granulin peptides have been implicated in pro-inflammatory behavior. A C. elegans study showed that granulin peptides may also participate in toxic activity.

Immunogen: Recombinant protein within Human GRN aa 18-593 (HA211273).

Positive control: Recombinant Human GRN protein (HA211273).

Subcellular location: Secreted, Lysosome.

Database links: SwissProt: P28799 Human

Recommended Dilutions:

ELISA(Cap) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH22-43] to Human GRN antibody (Detector) (HA725310) and Recombinant Human GRN protein (HA211273) as the standard. The reference range value is 3.125-100 ng/mL.

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

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

Purity: Protein A affinity purified.

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

Service mail:support@huabio.cn

 华安生物
HUABIO
www.huabio.cn

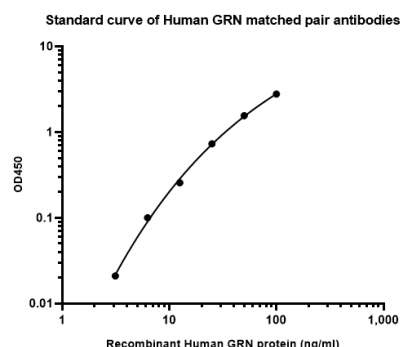
Applications:WB=Western blot IHC-P=Immunohistochemistry (paraffin) IF-Cell=Immunofluorescence (Cell) IF-Tissue=Immunofluorescence (Tissue) FC=Flow cytometry IP=Immunoprecipitation

Images

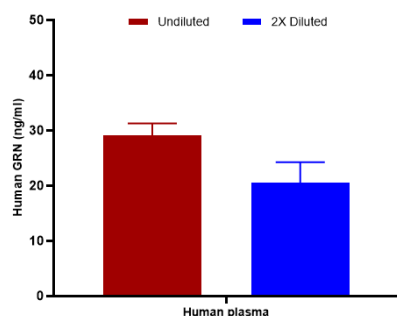
Fig1: Sandwich ELISA analysis of GRN matched pair antibodies

Capture: HA725309, Human GRN Rabbit mAb [PSH22-42]

Detector: HA725310, Human GRN Rabbit mAb [PSH22-43]



Elisa assay was performed by coating wells of a 96-well plate with 50 μ l per well of capture antibody (HA725309) diluted in carbonate/bicarbonate buffer, at a concentration of 2 μ g/ml overnight at 4°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 GRN protein (HA211273) starting from 2,000 pg/ml to 0 pg/ml and detect antibody (HA725310, Biotin, 0.2 μ g/ml) for 1 hour at 30°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°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 Human GRN in human plasma samples.

Capture: HA725309, Human GRN Rabbit mAb [PSH22-42]

Detector: HA725310, Human GRN Rabbit mAb [PSH22-43]

The concentrations of Human Factor B were measured in duplicates, interpolated from the Human Factor B standard curve and corrected for sample dilution. Undiluted samples are human plasma 50%. The interpolated dilution factor corrected values are plotted (mean $\pm$ SD, n=2). The mean Human Factor B concentration was determined to be 24.827 ng/ml in human plasma.

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

Background References

1. Wang C et al. Clonorchis sinensis Granulin Promotes Malignant Transformation of Hepatocyte Through EGFR-Mediated RAS/MAPK/ERK and PI3K/Akt Signaling Pathways. Front Cell Infect Microbiol. 2021 Nov
2. Zhang T et al. Differential regulation of progranulin derived granulin peptides. Mol Neurodegener. 2022 Feb

Hangzhou Huaan Biotechnology Co., Ltd.

Orders:0086-571-88062880

Technical:0086-571-89986345

Service mail:support@huabio.cn

华安生物
HUABIO
www.huabio.cn

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