

Human Progranulin/GRN, Tag Free Protein

HA211273



Product name:	Human Progranulin/GRN, Tag Free
Species reactivity:	Human
Protein construction description:	A DNA sequence encoding the human Progranulin/GRN protein (P28799-1) (Thr 18-Leu 593) was expressed with tag free.

Background: 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.

Purity:	>95% as determined by SDS-PAGE.
Endotoxin:	Less than 1.0 EU per µg by the LAL method.
Fragment region:	Progranulin/GRN (18-593)
Source:	HEK293
Accession:	P28799-1
Predicted molecular mass:	62.6 kD
Formulation:	Lyophilized from a 0.2 µm filtered solution of PBS, pH7.4, 5% Trehalose, 5% mannitol.
Reconstitution:	Reconstitute at 250 µg/ml in sterile water.
Storage:	Please avoid repeated freeze-thaw cycles. Samples are stable for up to twelve months from date of receipt at -20°C to -80°C. It is recommended that aliquot the reconstituted solution to minimize freeze-thaw cycles.

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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

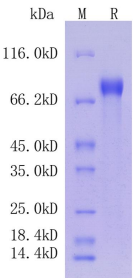


Fig1: Protein on SDS-PAGE under reducing (R) condition.

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