

Recombinant Mouse GRN Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51366

Size: 10ug, 100ug

Protein Name: Progranulin (PGRN) (Acrogranin) (Epithelin/granulin precursor) (Glycoprotein of 88 Kda) (GP88) (Glycoprotein 88) (PC cell-derived growth factor) (PCDGF) (Proepithelin) (PEPI) [Cleaved into: Paragranulin; Granulin-1; Granulin-2; Granulin-3; Granulin-4; Granulin-5; Granulin-6; Granulin-7]

Synonym: Grn

UniProt ID: P28798

UniProt Link: www.uniprot.org/uniprotkb/P28798/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 589 AA

Molecular Weight: 63 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MWVLMSWLAFAGLVAGTQCPDGQFCPVACCLDQGGANYSCCNPLLDTWPRITSHHLDGSCQTH
GHCPAGYSCLLTVSGTSSCCPFSKGVSCGDGYHCCPQGFHCSADGKSCFQMSDNPLGAVQCPGS
QFECPSATCCIMVDGSWGCCPMPQASCCEDRVHCCPHGASCDLVHTRCVSPTGHTLLKKFPAQ
KTNRAVSLPFSVVCDAKTQCPDDSTCCELPTGKYGCCPMPNAICCSDDLHCCPQDTVCDLIQSKC
LSKNYTTDLLTKLPGYPVKEVKCDMEVSCPEGYTCCRLNTGAWGCCPFAKAVCCEDHIHCCPAGFQ
CHTEKGTCEMGILQVPWMKKVIAPLRLPDPQILKSDTPCDDFTRCPTNNTCCKLNSGDWGCCPIPEA
VCCSDNQHCCPQGFQCLAQGYCQKGDVMVAGLEKIPARQTTPLQIGDIGCDQHTSCPVGQTCCPSL
KGSWACCQLPHAVCCEDRQHCCPAGYTCNVKARTCEKDVFQIPPVLLTLGPKVGNVECGEGHFC
HDNQTCCKDSAGVWACCPYLKGVCCRDGRHCCPGGFHCSARGTKCLRKKIPRWDMFLRDPVPRP
LL

3. Buffer Composition



Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

5. Product Description

This product is recombinant Progranulin (PGRN) (Acrogranin) (Epithelin/granulin precursor) (Glycoprotein of 88 Kda) (GP88) (Glycoprotein 88) (PC cell-derived growth factor) (PCDGF) (Proepithelin) (PEPI) [Cleaved into: Paragranulin; Granulin-1; Granulin-2; Granulin-3; Granulin-4; Granulin-5; Granulin-6; Granulin-7] produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

Protein Function: Secreted protein that acts as a key regulator of lysosomal function and as a growth factor involved in inflammation, wound healing and cell proliferation (PubMed:12524533, PubMed:20026663, PubMed:23041626, PubMed:27789271, PubMed:28073925, PubMed:28453791, PubMed:28541286, PubMed:8496151). Regulates protein trafficking to lysosomes, and also the activity of lysosomal enzymes (PubMed:27789271, PubMed:28453791, PubMed:28541286). Also facilitates the acidification of lysosomes, causing degradation of mature CTSD by CTSB (PubMed:28073925). In addition, functions as a wound-related growth factor that acts directly on dermal fibroblasts and endothelial cells to promote division, migration and the formation of capillary-like tubule structures (PubMed:12524533). Also promotes epithelial cell proliferation by blocking TNF-mediated neutrophil activation preventing release of oxidants and proteases (PubMed:8496151). Moreover, modulates inflammation in neurons by preserving neurons survival, axonal outgrowth and neuronal integrity (PubMed:20026663, PubMed:23041626).; [Granulin-3]: Inhibits epithelial cell proliferation and induces epithelial cells to secrete IL-8.; [Granulin-7]: Stabilizes CTSD through interaction with CTSD leading to maintain its aspartic-type peptidase activity.

Subcellular Localization: Secreted . Lysosome . Note=Endocytosed by SORT1 and delivered to lysosomes. Targeted to lysosome by PSAP via M6PR and LRP1, in both biosynthetic and endocytic pathways (By similarity). Co-localized with GBA1 in the intracellular trafficking compartments until to lysosome (PubMed:27789271).

6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.