

Recombinant Human GRN Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP50392

Size: 10ug, 100ug

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

Synonym: GRN

UniProt ID: P28799

UniProt Link: www.uniprot.org/uniprotkb/P28799/entry

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 593 AA

Molecular Weight: 64 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MWTLVSWVALTAGLVAGTRCPDGQFCPVACCLDPGGASYSCCRPLLDKWPTTSLRHLGGPCQVD
AHCSAGHSCIFTVSGTSSCCPFPEAVACGDGHHCCPRGFHCSADGRSCFQRSGNNSVGAIQCPDS
QFECPDFSTCCVMVDGSGWCCPMPQASCCEDRVHCCPHGAFCDLVHTRCITPTGTHPLAKKLPAQ
RTNRAVALSSSVMCPDARSRCPDGSGTCCELPSGKYGCCPMPNATCCSDHLHCCPQDQTVCDLIQSK
CLSKENATTDLLTKLPAHTVGDVKCDMEVSCPDGYTCCRLQSGAWGCCPFTQAVCCEDHIHCCPA
GFTCDTQKGTCEQGPHQVPWMEKAPAHLSLPDPQALKRDVPCDNVSSCPSSDTCCQLTSGEWGC
CPIPEAVCCSDHQHCCPQGYTCVAEGQCQRGSEIVAGLEKMPARRASLSHPRDIGCDQHTSCPVG
QTCCPSLGGSWACCQLPHAVCCEDRQHCCPAGYTCNVKARSCEKEVVSAPATFLARSPHVGVK
DVECGEGHFCHDNQTCCRDNRQGWACCPYRQGVCCADRRHCCPAGFRCAARGTKCLRREAPR
WDAPLRDPALRQLL

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 precursor) (Glycoprotein of 88 Kda) (GP88) (Glycoprotein 88) (Granulin precursor) (PC cell-derived growth factor) (PCDGF) (Proepithelin) (PEPI) [Cleaved into: Paragranulin; Granulin-1 (Granulin G); Granulin-2 (Granulin F); Granulin-3 (Epithelin-2) (Granulin B); Granulin-4 (Epithelin-1) (Granulin A); Granulin-5 (Granulin C); Granulin-6 (Granulin D); Granulin-7 (Granulin E)] 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:12526812, PubMed:18378771, PubMed:28073925, PubMed:28453791, PubMed:28541286). Regulates protein trafficking to lysosomes, and also the activity of lysosomal enzymes (PubMed:28453791, PubMed:28541286). Also facilitates the acidification of lysosomes, causing degradation of mature CTSD by CTSD (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 (By similarity). Also promotes epithelial cell proliferation by blocking TNF-mediated neutrophil activation preventing release of oxidants and proteases (PubMed:12526812). Moreover, modulates inflammation in neurons by preserving neurons survival, axonal outgrowth and neuronal integrity (PubMed:18378771).; [Granulin-4]: Promotes proliferation of the epithelial cell line A431 in culture.; [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 (PubMed:21092856, PubMed:28073925). Targeted to lysosome by PSAP via M6PR and LRP1, in both biosynthetic and endocytic pathways (PubMed:26370502, PubMed:28073925). Co-localized with GBA1 in the intracellular trafficking compartments until to lysosome (By similarity).

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.