GRN
Recombinant Human Progranulin

Catalog No.	CRH027A CRH027B	**Quantity:**	10 µg 50 µg

Alternate Names: CLN11, GEP, GP88, PCDGF, PEPI, PGRN

Description: Progranulin (PGRN) is a widely expressed pluripotent growth factor which plays a role in processes such as development, wound repair and inflammation by activating signaling cascades that control cell cycle progression and cell motility. Its function in the central nervous system is of interest, as mutations in the PGRN gene were found in cases of frontotemporal degeneration (FTLD). In addition, PGRN has also been linked to tumorigenesis. Progranulin is a biomarker for FTLD, other types of Alzheimer's Disease (AD) and potentially for MCI (Mild Cognitive Impairment). Additionally, PGRN is described as a new ligand of TNF receptors and a potential therapeutic against inflammatory disease like arthritis.

Recombinant Human Progranulin is composed of a signal peptide and aa 1-593 of human progranulin. The protein reflects the native sequence with no additional aa.

Concentration: After reconstitution:
10 µg size: 0.1 mg/ml
50 µg size: 1 mg/ml

Gene ID: 2896

Protein Accession No: P28799

Source: HEK 293 cells

Molecular Weight: ~76 kDa (glycosylated) by SDS-PAGE

Formulation: Lyophilized product containing PBS.

Purity: ≥98% (SDS-PAGE)

Endotoxin Level: <0.01 EU/µg purified protein as determined by LAL test (Lonza).

Biological Activity: Activates phospho-ERK1/2 in neuronal mouse P19 cells. Regulates food intake and body weight.

Reconstitution: 10 µg size: Reconstitute with 100 µl sterile water.
50 µg size: Reconstitute with 50 µl sterile water.

Storage & Stability: Store at 4°C upon arrival and at -20°C for long term. Lyophilized product is stable for at least 6 months after receipt when stored at -20°C. After reconstitution, prepare aliquots and store at -20°C. PBS containing at least 0.1% BSA or HSA should be used for further dilutions. **Avoid repeated freeze-thaw cycles.**

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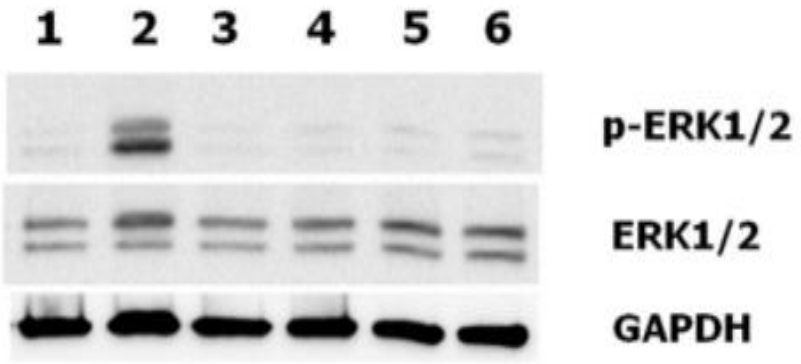
Application Notes: Methods for Neuronal mouse P19 cells (Fig. 1): Undifferentiated mouse P19 embryonal carcinoma cells were induced to differentiated in 1 μM retinoic acid (RA) in α-minimum essential medium (αMEM) containing 10% heat-treated fetal bovine serum on bacterial grade plates for 3-4 days to allow aggregates to form (generation of embryonic bodies). The aggregates were then plated out on tissue culture grade plates in the absence of RA for 3-4 days.

Fig. 1. Effect of Recombinant Human Progranulin on phospho- and non-phospho-ERK1/2 in differentiated neuronal mouse P19 cells. Reactions were carried out at 37°C over 0, 5, 10, 30, 60, or 120 mins by adding progranulin (500 ng/ml) to P19 cells maintained under serum starvation conditions for 24 hrs. GAPDH was used as a loading control for Western blotting.



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