

## Recombinant Human Progranulin (rh PGRN)

**Synonyms:** Acrogranin, Proepithelin, PC cell Derived Growth Factor (PCDGF)

**Introduction:** A 88-kDa progranulin is a single precursor protein of granulins which are a family of secreted, glycosylated peptides that are cleaved from a single precursor protein with 7.5 repeats of a highly conserved 12-cysteine granulin/epithelin motif. Granulins are a variety of active, 6 kDa peptides and named granulin A (epithelin 1), granulin B (epithelin 2), granulin C, etc. Both the peptides and intact progranulin protein regulate cell growth. However, different members of the granulin protein family may act as inhibitors, stimulators or have dual actions on cell growth. Granulin family members are important in normal development, wound healing and tumorigenesis.

**Description:** Human recombinant Progranulin fused to FLAG at C-terminus produced in HEK is a single, glycosylated, polypeptide chain containing 593 amino acids and having a molecular mass of 88 kDa. The Progranulin is purified by standard chromatographic techniques.

**Source:** HEK293 cells

**Physical Appearance:** Sterile filtered clear solution.

**Formulation:** The protein solution contains PBS.

**Stability:** Progranulin although stable at 4°C for 3 weeks, should be stored at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA).

**Purity:** Greater than 90.0% as determined by RP-HPLC and by SDS-PAGE.

### Biological Activity:

- The effects of phospho-ERK1/2 and non phospho-ERK1/2 by human progranulin-FLAG in **THP-1 cells**: To examine the signal of phospho-p44/42 MAPK and p44/42 MAP kinase, reactions were carried out at 37 degrees Celsius over 0, 30, 60, minutes, respectively by adding the recombinant protein (100ng/ml corresponding to a specific activity of 100IU/mg) to the THP-1 monocyte cell, which was maintained with serum starvation for 24hrs. Recombinant proteins in lanes 1, 2, and 3 were subjected to THP-1 monocyte cell treatments over 0, 30, 60mins, respectively.
- The effects of phospho-ERK1/2 and non phospho-ERK1/2 by human progranulin-FLAG in **MCF10A cells**: To examine the signal of phospho-p44/42 MAPK and p44/42 MAP kinase, reactions were carried out at 37 degrees Celsius over 0, 10, 30, 60mins, respectively by adding the recombinant protein(500ng/ml) to the MCF10A human breast epithelial cells, which was maintained with serum starvation for 24hrs. Recombinant proteins in lanes 2, 3, and 4 were subjected to MCF10A human breast epithelial cell treatments over 0, 10, 30, 60mins, respectively.

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<i>small</i>	2 µg	Cat.N°	11344772
<i>medium</i>	10 µg	Cat.N°	11344773

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