



## RayBiotech, Inc.

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### Certificate of Analysis and Data Sheet

## Recombinant Human Progranulin

**Catalog No.**  
228-11238

**Source**  
*HEK 293 cells*

### Synonyms

GRN, PGRN, granulin, Acrogranin, propithelin, PC cell derived growth Factor, GEP, GP88, PEPI, PCDGF.

### Introduction

A 88-kDa progranulin, also called proepithelin and PC cell-derived growth factor, 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

Progranulin Human Recombinant 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.

### Physical Appearance

Sterile Filtered clear solution.

### Formulation

The protein solution contains 1x PBS.

### Purity

Greater than 90.0% as determined by:

- Analysis by RP-HPLC.
- Analysis by SDS-PAGE.

**The products are furnished for LABORATORY RESEARCH USE ONLY.  
Not for diagnostic or therapeutic use.**



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### ***Biological Activity***

1. 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) 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.
2. 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.

### ***Stability/Storage***

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).

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