

## Progranulin, Human CellExp™, human recombinant

<b>CATALOG NO:</b>	4738-10	10 µg
<b>SOURCE:</b>	HEK 293 cells (aa 1-593)	
<b>SEQUENCE:</b>	Signal peptide and human progranulin (aa 1-593) are fused at the C-terminus to a FLAG®-tag.	
<b>PURITY:</b>	>90% by SDS-PAGE and HPLC analysis	
<b>MOL. WEIGHT:</b>	76.0 kDa (FLAG-tag at C-terminus)	
<b>ENDOTOXIN LEVEL:</b>	<0.01 EU/µg purified protein by LAL test	
<b>FORM:</b>	Lyophilized. Contains PBS	
<b>RECONSTITUTION:</b>	Reconstitute with sterile water	

### STORAGE CONDITIONS:

After reconstitution, prepare aliquots and store at -20°C. Avoid freeze/thaw cycles. PBS containing at least 0.1% BSA should be used for further dilutions.

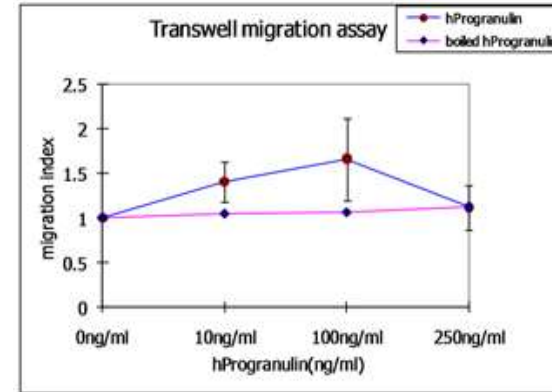
### DESCRIPTION:

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.

### BIOLOGICAL ACTIVITY:

Activates ERK phosphorylation in THP-1 and MCF10A cells and induces cell migration of THP-1 monocytic leukemia cells.

**FOR RESEARCH USE ONLY! Not to be used on humans.**



**Chemotaxis effect of Progranulin in THP-1 Cells:** Cell migration of THP-1 monocytic leukemia cells was evaluated in disposable 24 well transwell polystyrene membrane with 8µm size pores. 0ng/ml, 10ng/ml, 100ng/ml and 250ng/ml of Progranulin were diluted in RPMI 1640 supplemented with 0.5% FBS respectively. In case boiled hProgranulin, proteins were boiled at 100°C for 10min. And then hProgranulin samples were added to the lower chamber. THP-1 cells ( $2 \times 10^5$  cells per well), in the same media with Progranulin, were added to the upper chamber. After 16 hours incubation at 37°C in 5% CO<sub>2</sub> humidified atmosphere, migration cells in the lower chamber were counted. Migrated cells in two separate fields per well from triplicate wells were enumerated on a hemacytometer by means light microscopy.

### RELATED PRODUCTS:

- Progranulin (human) ELISA Kit (**Cat. No. K4738-100**)
- Progranulin (mouse) ELISA Kit (**Cat. No. K4734-100**)
- Progranulin (rat) ELISA Kit (**Cat. No. K4735-100**)
- Human CellExp™ Progranulin (untagged), Human Recombinant (**Cat. No. 4737-10**)
- Human CellExp™ Progranulin (untagged), Mouse Recombinant (**Cat. No. 4733-10**)
- Human CellExp™ Progranulin (untagged), Rat Recombinant (**Cat. No. 4736-10**)
- Human CellExp™ Progranulin, Mouse Recombinant (**Cat. No. K4734-10**)
- Human CellExp™ Progranulin, Rat Recombinant (**Cat. No. K4735-10**)