

Progranulin (Untagged), Human CellExp™, mouse recombinant

CATALOG #: 4733-10 10 µg
4733-50 50 µg

ALTERNATE NAMES: Proepithelin, PEPI, PC Cell-derived Growth Factor.

SOURCE: HEK 293 cells

SEQUENCE: Signal peptide and mouse progranulin (aa 1-589) is untagged. Reflects the native sequence with no additional amino acids.

PURITY: ≥95% by SDS-PAGE

MOL. WEIGHT: ~65.0 kDa (SDS-PAGE)

FORMULATION: Lyophilized from 0.2 µm-filtered solution in PBS, pH 7.2.

RECONSTITUTION: Reconstitute in distilled water

ENDOTOXIN CONTENT: <0.1 EU/µg purified protein

STORAGE CONDITIONS: Prepare aliquots after reconstitution and store at -20°C. Avoid repeated freeze thaw cycles.

DESCRIPTION:

Progranulin (PGRN), also called proepithelin and PC cell-derived growth factor, is a single precursor protein of granulins which are a family of secreted, glycosylated peptides. It 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 fronto-temporal degeneration (FTLD). In addition, PGRN has also been linked to tumorigenesis. Progranulin is a biomarker for FTL, 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.

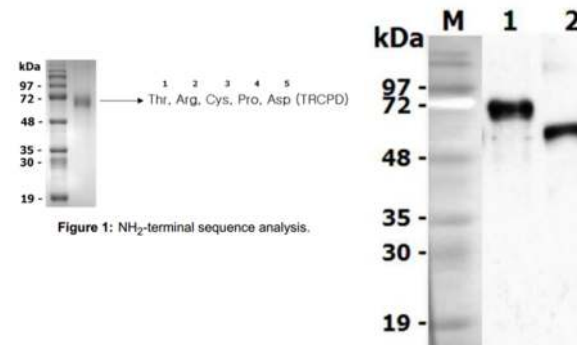


Figure 1: NH₂-terminal sequence analysis.

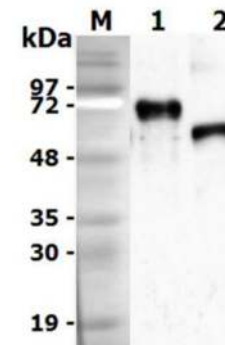


Figure 2: Deglycosylation of mouse progranulin. To examine the deglycosylation of mouse Progranulin, 1 µg of mouse progranulin is denatured with 1X glycoprotein denaturing buffer at 100°C for 10 minutes. After the addition of NP-40 and G7 reaction buffer, twofold dilutions of PNGase F are added and the reaction mix is incubated for 1 hour at 37°C. Separation of reaction products is visualized by immunoblotting using anti-Progranulin pAb (mouse).

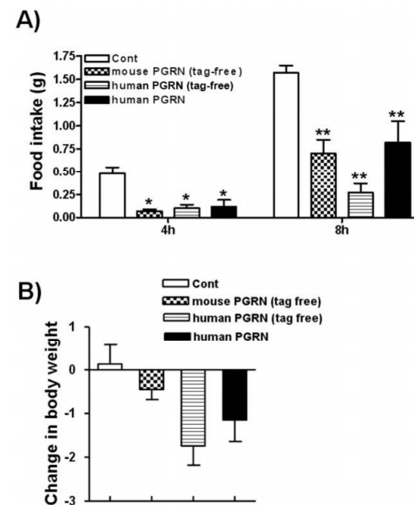


Figure 3: Regulation of food intake and body weight by mouse progranulin. Permanent 26-gauge stainless steel cannulae were implanted into the third ventricle (ICV), or into the bilateral mediobasal hypothalamus (iMBH) of mice. After a 1-week recovery period, mice were handled daily for 3 days to acclimatize them to the injection procedure. Correct positioning of ICV-implanted cannulae was tested by verifying the presence of a dipsogenic response to the presence of a dipsogenic response to the presence of angiotensin-2 (50 ng). The correct positioning of each iMBH cannulae was confirmed by histological examination, performed by independent observer after each animal was sacrificed. Only mice in which cannulae had been correctly positioned were included in data analysis. The peptides, 2-DG and AICAR were dissolved in 0.9% (w/v) saline and administered in a total volume of 2.5 ml for ICV injection and 1 ml for iMBH injection, respectively. Food intake and body weight were monitored for 24 h post-injection.

RELATED PRODUCTS:

- Recombinant Mouse Progranulin (Cat. No. 4734-10, 100)
- Recombinant Human Progranulin (Cat. No. 4738-10, 100)
- Recombinant Rat Progranulin (Cat. No. 4735-10, 50)
- Recombinant Rat Progranulin (Untagged) (Cat. No. 4736-10, 50)
- Recombinant Human Progranulin (Untagged) (Cat. No. 4737-10, 50)

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

