

AG-40A-0189AA

17-Jan-2012

**Progranulin (mouse) (rec.) (untagged) (BULK)**

[Proepithelin; PEPI; PC Cell-derived Growth Factor]

AG-40A-0189AA-C500      500 µg

Source/Host                      HEK 293 cells  
MW                                      ~65kDa (SDS-PAGE)  
Sequence                              Signal peptide and mouse progranulin (aa 1-589) is untagged. Reflects the native sequence with no additional aa.

**Handling / Storage**

Shipping                              BLUE ICE  
Short Term Storage              +4°C  
Long Term Storage                -20°C

After opening, prepare aliquots and store at -20°C. Avoid freeze/thaw cycles.

**Use / Stability**

Working aliquots are stable for up to 3 months when stored at -20°C.

MSDS available at [www.adipogen.com](http://www.adipogen.com) or upon request.

**Product Specifications**

Purity                                      ≥95% (SDS-PAGE)  
Formulation                              Lyophilized from 0.2µm-filtered solution in PBS, pH 7.2.  
Reconstitution                              Reconstitute in distilled water.  
Endotoxin Content                              <0.1EU/µg purified protein (LAL test; Lonza).

**Other Product Data**

UniProt link P28798: Granulins (mouse) [Precursor]

**Product 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.

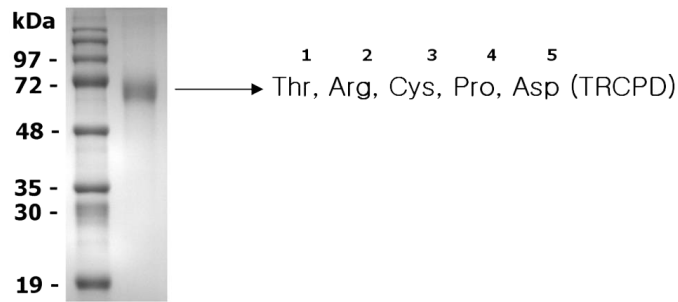
**WARNING:** Intended for research use only. This product is not intended or approved for human, diagnostics, therapeutic or veterinary use. Use of this product for human or animal testing is extremely hazardous and may result in disease, severe injury, or death. **MATERIAL SAFETY DATA:** Review the complete Material Safety Data Sheet before use.

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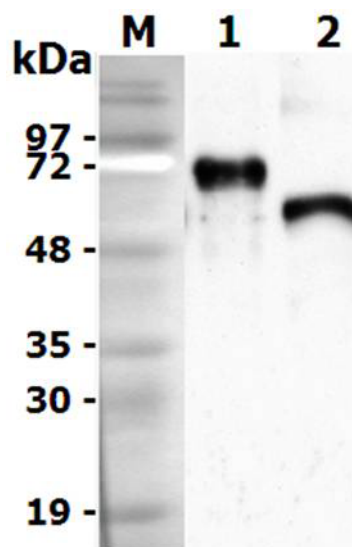
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**Figure 1:** NH<sub>2</sub>-terminal sequence analysis.



**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 (mouse), pAb (Prod. No. AG-25A-0093).

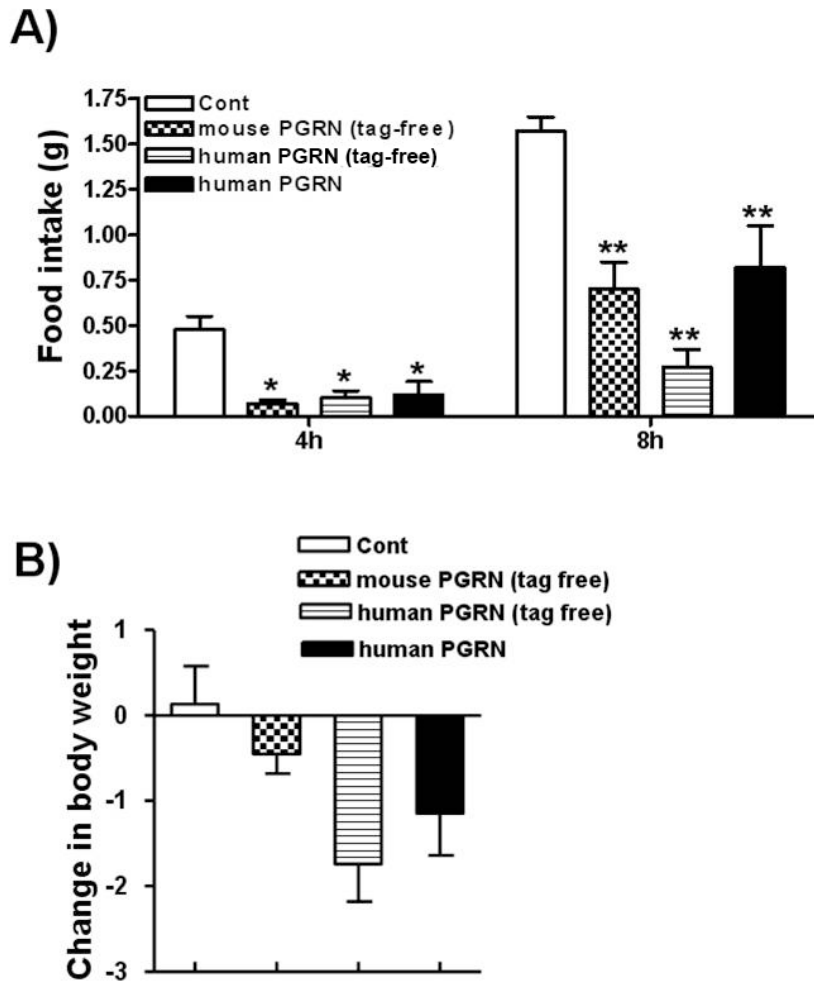
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**Figure 3: Regulation of food intake and body weight by mouse progranulin.** Permanent 26-gauge stainless steel cannulae were implanted into the third ventricle (ICV), or into the bilateral mediobasal hypothalamus (iMBH) of mice. After a 1-week recovery 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 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.

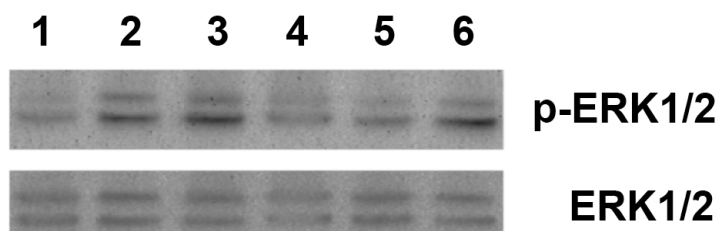
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**Figure 4: The effects on phospho-ERK1/2 and non-phospho-ERK1/2 by Progranulin (mouse) (rec.) (untagged) (Prod. No. AG-40A-0189) in neuronal differentiated mouse P19 cells.** Undifferentiated mouse P19 embryonal carcinoma cells were induced to differentiated in 1 $\mu$ M retinoic acid (RA) in  $\alpha$ -minimum essential medium ( $\alpha$ MEM) 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 tissue culture grade plates in the absence of RA for 3~4days. To examine the induction of signal of phospho-p44/42 MAPK and p44/42 MAP kinase, reactions were carried out at 37°C over 0, 5, 10, 30, 60, 120mins, respectively by adding the recombinant protein (500ng/ml) to the neuronal differentiated mouse P19 embryonal carcinoma cells, which were maintained with serum starvation for 24hrs. Treatment with Progranulin (mouse) (rec.) (untagged) was performed in lanes 1, 2, 3, 4, 5, and 6 over 0, 5, 10, 30, 60, 120mins, respectively.

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