Mouse Granulin / GRN / Progranulin Protein (His Tag)

Catalog Number: **50396-M08H**

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Biological Solution Specialist

General Information

Gene Name Synonym:

CLN11; GEP; GP88; Granulin; PCDGF; PEPI; PGRN; Progranulin; epithelin; Pgrn

Protein Construction:

A DNA sequence encoding the mouse GRN (NP_032201.2) (Met 1-Leu 589) was fused with a polyhistidine tag at the C-terminus.

Source: Mouse

Expression Host: Human Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 ℃

Predicted N terminal: Thr 18

Molecular Mass:

The secreted recombinant mouse GRN comprises 583 amino acids and has a predicted molecular mass of 63 kDa. As a result of glycosylation, the apparent molecular mass of rmGRN is approximately 70-90 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

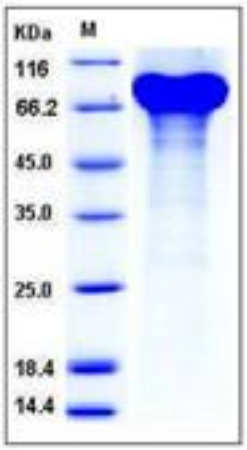
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

&Granulins 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. The precursor protein, progranulin, is also called proepithelin and PC cell-derived growth factor. Cleavage of the signal peptide produces mature granulin which can be further cleaved into a variety of active, 6 kDa peptides. These smaller cleavage products are named granulin A, granulin B, granulin C, etc. Epithelins 1 and 2 are synonymous with granulins A and B, respectively. Both the peptides and intact granulin 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. Granulins have possible cytokine-like activity. They may play a role in inflammation, wound repair, and tissue remodeling. Granulin-4 promotes proliferation of the epithelial cell line A431 in culture while granulin-3 acts as an antagonist to granulin-4, inhibiting the growth. Granulin expression inhibited Tat transactivation, and tethering experiments showed that this effect was due, at least in part, to a direct action on cyclin T1 in the absence of Tat.

References

1.Hoque M, *et al*. (2003) The growth factor granulin interacts with cyclin T1 and modulates P-TEFb-dependent transcription. Mol Cell Biol. 23(5): 1688-702.
2.Bateman A, *et al*. (1990) Granulins, a novel class of peptide from leukocytes. Biochem Biophys Res Commun. 173(3): 1161-8.
3.Trinh DP, *et al*. (1999) Epithelin/granulin growth factors: extracellular cofactors for HIV-1 and HIV-2 Tat proteins. Biochem Biophys Res Commun. 256(2): 299-306.