Data Sheet (Cat.No.TMPY-01435)

TargetMol

Progranulin Protein, Mouse, Recombinant (His)

General Information

Synonyms:	Granulin Precursor;Pgrn;epithelin
Protein Construction:	A DNA sequence encoding the mouse Progranulin (NP_032201.2) (Met 1-Leu 589) was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Thr 18
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	P28798
Molecular Weight:	63 kDa (predicted); 70-90 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Shipping:

In general, Lyophilized powders are shipping with blue ice.

Protein Background

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.

Reference

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.

Bateman A, et al. (1990) Granulins, a novel class of peptide from leukocytes. Biochem Biophys Res Commun. 173 (3): 1161-8.

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.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481