



<http://www.uniprot.org/citations/28453791> target="\_blank">28453791</a>, PubMed:<a href="http://www.uniprot.org/citations/28541286" target="\_blank">28541286</a>). Regulates protein trafficking to lysosomes and, also the activity of lysosomal enzymes (PubMed:<a href="http://www.uniprot.org/citations/28453791" target="\_blank">28453791</a>, PubMed:<a href="http://www.uniprot.org/citations/28541286" target="\_blank">28541286</a>). Facilitates also the acidification of lysosomes, causing degradation of mature CTSD by CTSB (PubMed:<a href="http://www.uniprot.org/citations/28073925" target="\_blank">28073925</a>). In addition, functions as a wound-related growth factor that acts directly on dermal fibroblasts and endothelial cells to promote division, migration and the formation of capillary-like tubule structures (By similarity). Also promotes epithelial cell proliferation by blocking TNF-mediated neutrophil activation preventing release of oxidants and proteases (PubMed:<a href="http://www.uniprot.org/citations/12526812" target="\_blank">12526812</a>). Moreover, modulates inflammation in neurons by preserving neurons survival, axonal outgrowth and neuronal integrity (PubMed:<a href="http://www.uniprot.org/citations/18378771" target="\_blank">18378771</a>).

### Cellular Location

Secreted. Lysosome Note=Endocytosed by SORT1 and delivered to lysosomes (PubMed:21092856, PubMed:28073925). Targeted to lysosome by PSAP via M6PR and LRP1, in both biosynthetic and endocytic pathways (PubMed:26370502, PubMed:28073925). Co-localized with GBA1 in the intracellular trafficking compartments until to lysosome (By similarity)  
{ECO:0000250|UniProtKB:P28798, ECO:0000269|PubMed:21092856, ECO:0000269|PubMed:26370502, ECO:0000269|PubMed:28073925}

### Tissue Location

In myelogenous leukemic cell lines of promonocytic, promyelocytic, and proerythroid lineage, in fibroblasts, and very strongly in epithelial cell lines. Present in inflammatory cells and bone marrow. Highest levels in kidney

## Goat Anti-Granulin / GRN Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

## Goat Anti-Granulin / GRN Antibody - Images



AF1504a (1 µg/ml) staining of HeLa lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

### **Goat Anti-Granulin / GRN Antibody - 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 88 kDa 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.

### **Goat Anti-Granulin / GRN Antibody - References**

Prion Protein Codon 129 Polymorphism Modifies Age at Onset of Frontotemporal Dementia With the C.709-1G>A Progranulin Mutation. Moreno F, et al. Alzheimer Dis Assoc Disord, 2010 Aug 12. PMID 20711061.

Variation at the NFATC2 Locus Increases the Risk of Thiazolinedione-Induced Edema in the Diabetes REduction Assessment with ramipril and rosiglitazone Medication (DREAM) Study. Bailey SD, et al. Diabetes Care, 2010 Jul 13. PMID 20628086.

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