10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Goat Anti-Granulin / GRN Antibody
Peptide-affinity purified goat antibody
Catalog # AF1504a

Specification

Goat Anti-Granulin / GRN Antibody - Product Information

Application	**WB**
Primary Accession	P28799
Other Accession	NP_002078, 2896
Reactivity	**Human**
Host	**Goat**
Clonality	**Polyclonal**
Concentration	**100ug/200ul**
Isotype	**IgG**
Calculated MW	**63544**

Goat Anti-Granulin / GRN Antibody - Additional Information

Gene ID 2896

Other Names
Granulins, Proepithelin, PEPI, Acrogranin, Glycoprotein of 88 Kda, GP88, Glycoprotein 88, Progranulin, Paragranulin, Granulin-1, Granulin G, Granulin-2, Granulin F, Granulin-3, Granulin B, Granulin-4, Granulin A, Granulin-5, Granulin C, Granulin-6, Granulin D, Granulin-7, Granulin E, GRN

Format
0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
Goat Anti-Granulin / GRN Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-Granulin / GRN Antibody - Protein Information

Name GRN (HGNC:4601)

Function
Secreted protein that acts as a key regulator of lysosomal function and as a growth factor involved in inflammation, wound healing and cell proliferation (PubMed:12526812, PubMed:18378771, PubMed:28073925, PubMed:<a

href="http://www.uniprot.org/citations/28453791" target="_blank">28453791, PubMed:28541286). Regulates protein trafficking to lysosomes and, also the activity of lysosomal enzymes (PubMed:28453791, PubMed:28541286). Facilitates also the acidification of lysosomes, causing degradation of mature CTSD by CTSB (PubMed:28073925). 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:12526812). Moreover, modulates inflammation in neurons by preserving neurons survival, axonal outgrowth and neuronal integrity (PubMed:18378771).

Cellular Location
Secreted. Lysosome Note=Endocytosed by SORT1 and delivred 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 Cytomety
- 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 Thiazolinedinedione-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.
MicroRNA-29b regulates the expression level of human progranulin, a secreted glycoprotein implicated in frontotemporal dementia. Jiao J, et al. PLoS One, 2010 May 10. PMID 20479936.
Progranulin gene variability increases the risk for primary progressive multiple sclerosis in males. Fenoglio C, et al. Genes Immun, 2010 Sep. PMID 20463744.
Role of progranulin as a biomarker for Alzheimer's disease. Sleegers K, et al. Biomark Med, 2010 Feb. PMID 20387302.