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

GFI1 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1450a

Product Information

Application	WB, E
Primary Accession	Q99684
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	5D7
Isotype	IgG1
Calculated MW	45297
Description	This gene encodes a nuclear zinc finger protein that functions as a transcriptional repressor. This protein plays a role in diverse developmental contexts, including hematopoiesis and oncogenesis. It functions as part of a complex along with other cofactors to control histone modifications that lead to silencing of the target gene promoters. Mutations in this gene cause autosomal dominant severe congenital neutropenia, and also dominant nonimmune chronic idiopathic neutropenia of adults, which are heterogeneous hematopoietic disorders that cause predispositions to leukemias and infections. Multiple alternatively spliced variants, encoding the same protein, have been identified for this gene.Expression of GFI1 ranges from the hematopoietic and lymphoid system, to sensory epithelia, lung and parts of the CNS.
Immunogen	Purified recombinant fragment of human GFI1 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	2672
Other Names	Zinc finger protein Gfi-1, Growth factor independent protein 1, Zinc finger protein 163, GFI1, ZNF163
Dilution	WB~~1/500 - 1/2000 E~~N/A
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	GFI1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

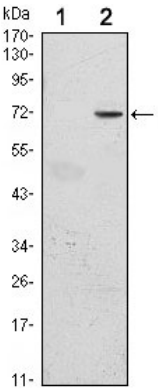
Name	GFI1
Synonyms	ZNF163
Function	Transcription repressor essential for hematopoiesis (PubMed: 11060035, PubMed:17197705, PubMed:17646546, PubMed:18805794, PubMed:19164764, PubMed:20190815, PubMed:8754800). Functions in a cell-context and development-specific manner (PubMed:11060035, PubMed:17197705, PubMed:17646546, PubMed:18805794, PubMed:19164764, PubMed:20190815, PubMed:8754800). Binds to 5'-TAAATCAC[AT]GCA-3' in the promoter region of a large number of genes (PubMed:11060035, PubMed:17197705, PubMed:17646546, PubMed:18805794, PubMed:19164764, PubMed:20190815, PubMed:8754800). Component of several complexes, including the EHMT2-GFI1-HDAC1, AJUBA-GFI1-HDAC1 and RCOR-GFI-KDM1A- HDAC complexes, that suppress, via histone deacetylase (HDAC) recruitment, a number of genes implicated in multilineage blood cell development (PubMed:16287849). Regulates neutrophil differentiation, promotes proliferation of lymphoid cells, and is required for granulocyte development (PubMed:12778173). Inhibits SPI1 transcriptional activity at macrophage-specific genes, repressing macrophage differentiation of myeloid progenitor cells and promoting granulocyte commitment (By similarity). Mediates, together with U2AF1L4, the alternative splicing of CD45 and controls T-cell receptor signaling (By similarity). Regulates the endotoxin-mediated Toll-like receptor (TLR) inflammatory response by antagonizing RELA (PubMed:20547752). Cooperates with CBFA2T2 to regulate ITGB1-dependent neurite growth (PubMed:19026687). Controls cell-cycle progression by repressing CDKNIA/p21 transcription in response to TGFB1 via recruitment of GFI1 by ZBTB17 to the CDKNIA/p21 and CDKNIB promoters (PubMed:16287849). Required for the maintenance of inner ear hair cells (By similarity). In addition to its role in transcription, acts as a substrate adapter for PRMT1 in the DNA damage response: facilitates the recognition of TP53BP1 and MRE11 substrates by PRMT1, promoting their methylation and the DNA damage response (PubMed:29651020).
Cellular Location	Nucleus Note=Colocalizes with PIAS3 and RUNX1T1 in nuclear dots

References

1. Genome Res. 2006 Jan;16(1):55-65. 2. Blood. 2007 Jan 1;109(1):100-8. 3. J Steroid Biochem Mol Biol. 2007 Mar;103(3-5):742-6.

Images

Figure 1: Western blot analysis using GFI1 mAb against HEK293 (1) and GFI1(AA: 2-250)-hIgGFc transfected HEK293 (2) cell lysate.



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