

NGAL Antibody
Purified Mouse Monoclonal Antibody (Mab)
Catalog # AP52863

Specification

NGAL Antibody - Product Information

Application	WB
Primary Accession	P80188
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG2b
Calculated MW	23 KDa

NGAL Antibody - Additional Information

Gene ID 3934

Other Names

24p3; 25 kDa alpha-2-microglobulin-related subunit of MMP-9; HNL; Lcn2; Lipocalin 2; Lipocalin-2; Migration stimulating factor inhibitor; MSFI; Neutrophil gelatinase-associated lipocalin; NGAL; NGAL_HUMAN; Oncogene 24p3; p25; Siderocalin.

Format

Purified mouse monoclonal antibody in PBS(pH 7.4) containing with 0.09% (W/V) sodium azide and 50% glycerol.

Storage

Store at -20 °C. Stable for 12 months from date of receipt

NGAL Antibody - Protein Information

Name LCN2

Synonyms HNL, NGAL {ECO:0000303|PubMed:8060329}

Function

Iron-trafficking protein involved in multiple processes such as apoptosis, innate immunity and renal development (PubMed: [12453413](http://www.uniprot.org/citations/12453413), PubMed: [20581821](http://www.uniprot.org/citations/20581821), PubMed: [27780864](http://www.uniprot.org/citations/27780864)). Binds iron through association with 2,3-dihydroxybenzoic acid (2,3-DHBA), a siderophore that shares structural similarities with bacterial enterobactin, and delivers or removes iron from the cell, depending on the context. Iron-bound form (holo-24p3) is internalized following binding to the SLC22A17 (24p3R) receptor, leading to release of iron and subsequent increase of intracellular iron concentration. In contrast, association of the iron-free form (apo-24p3) with the SLC22A17 (24p3R) receptor is followed by association with an intracellular siderophore, iron chelation and iron transfer to the extracellular medium, thereby

reducing intracellular iron concentration. Involved in apoptosis due to interleukin-3 (IL3) deprivation: iron-loaded form increases intracellular iron concentration without promoting apoptosis, while iron-free form decreases intracellular iron levels, inducing expression of the proapoptotic protein BCL2L11/BIM, resulting in apoptosis (By similarity). Involved in innate immunity; limits bacterial proliferation by sequestering iron bound to microbial siderophores, such as enterobactin (PubMed:27780864). Can also bind siderophores from M.tuberculosis (PubMed:15642259, PubMed:21978368).

Cellular Location

Secreted. Cytoplasmic granule lumen. Cytoplasmic vesicle lumen. Note=Upon binding to the SLC22A17 (24p3R) receptor, it is internalized (By similarity). Releases the bound iron in the acidic lumen of cytoplasmic vesicles (PubMed:12453413, PubMed:20581821).

{ECO:0000250|UniProtKB:P11672, ECO:0000269|PubMed:12453413, ECO:0000269|PubMed:20581821}

Tissue Location

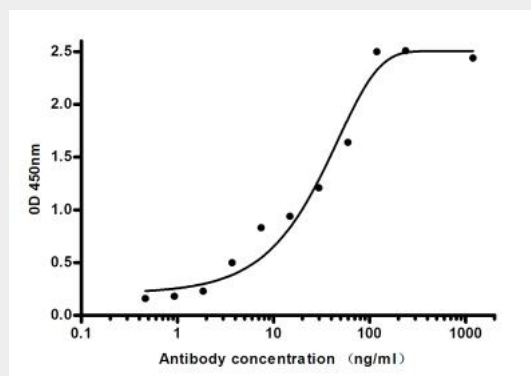
Detected in neutrophils (at protein level) (PubMed:7683678, PubMed:8298140). Expressed in bone marrow and in tissues that are prone to exposure to microorganism (PubMed:9339356) High expression is found in bone marrow as well as in uterus, prostate, salivary gland, stomach, appendix, colon, trachea and lung (PubMed:9339356). Expressed in the medullary tubules of the kidney (PubMed:30418175). Not found in the small intestine or peripheral blood leukocytes (PubMed:9339356).

NGAL 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](#)

NGAL Antibody - Images



Indirect ELISA assay for anti-NGAL mouse mAb. Antigen coating concentration: 4ug/ml.

NGAL Antibody - Background

Iron-trafficking protein involved in multiple processes such as apoptosis, innate immunity and renal development. Binds iron through association with 2,5-dihydroxybenzoic acid (2,5- DHBA), a siderophore that shares structural similarities with bacterial enterobactin, and delivers or removes iron from the cell, depending on the context. Iron-bound form (holo-24p3) is internalized following binding to the SLC22A17 (24p3R) receptor, leading to release of iron and subsequent increase of intracellular iron concentration. In contrast, association of the iron-free form (apo-24p3) with the SLC22A17 (24p3R) receptor is followed by association with an intracellular siderophore, iron chelation and iron transfer to the extracellular medium, thereby reducing intracellular iron concentration. Involved in apoptosis due to interleukin-3 (IL3) deprivation: iron-loaded form increases intracellular iron concentration without promoting apoptosis, while iron-free form decreases intracellular iron levels, inducing expression of the proapoptotic protein BCL2L11/BIM, resulting in apoptosis. Involved in innate immunity, possibly by sequestering iron, leading to limit bacterial growth.

NGAL Antibody - References

- Bundgaard J.R.,et al.Biochem. Biophys. Res. Commun. 202:1468-1475(1994).
Cowland J.B.,et al.Genomics 45:17-23(1997).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Ebert L.,et al.Submitted (JUN-2004) to the EMBL/GenBank/DDBJ databases.
Humphray S.J.,et al.Nature 429:369-374(2004).