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LCN2 Antibody (N-term) Blocking Peptide
Synthetic peptide
Catalog # BP7785a

Specification

LCN2 Antibody (N-term) Blocking Peptide - Product Information

Primary Accession P80188

LCN2 Antibody (N-term) Blocking Peptide - Additional Information

Gene ID 3934

Other Names
Neutrophil gelatinase-associated lipocalin, NGAL, 25 kDa alpha-2-microglobulin-related subunit of MMP-9, Lipocalin-2, Oncogene 24p3, Siderocalin LCN2, p25, LCN2, HNL, NGAL

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP7785a was selected from the N-term region of human LCN2. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

LCN2 Antibody (N-term) Blocking Peptide - 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, PubMed:27780864, PubMed:20581821). 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).

LCN2 Antibody (N-term) Blocking Peptide - Protocols

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

- Blocking Peptides

LCN2 Antibody (N-term) Blocking Peptide - Images

LCN2 Antibody (N-term) Blocking Peptide - Background

Neutrophil gelatinase-associated lipocalin (NGAL; also called lipocalin 2, siderocalin and neutrophil lipocalin) is a member of the lipocalin family of proteins which bind and transport small lipophilic molecules. NGAL is released by activated neutrophils and occurs as 25-kDa glycosylated single protein chain monomers, which form dimers and small amounts of higher oligomers, as well as complexes with matrix metalloproteinase 9 (MMP-9; gelatinase B). Low level expression of NGAL in a variety of epithelia may be increased in inflammation or cancers. The expression and release of NGAL from renal tubules are dramatically increased by ischemic or nephrotoxic injury.

LCN2 Antibody (N-term) Blocking Peptide - References

Iannetti,A., Proc. Natl. Acad. Sci. U.S.A. 105 (37), 14058-14063 (2008)Tong,Z., Cancer Res. 68 (15), 6100-6108 (2008)Bolignano,D., Kidney Blood Press. Res. 31 (4), 274-279 (2008)