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

Lipocalin 2/NGAL Rabbit pAb

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Catalog # AP52236

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	P80188
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	22588
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human Lipocalin 2
Epitope Specificity	101-198/198
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Secreted. Note=Upon binding to the SLC22A17 (24p3R) receptor, it is internalized.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Lipocalin 2 is a member of the lipocalin family which encompass more than 25 members (including proteins like retinol binding protein, a1 microglobulin, b lactoglobulin, apolipoprotein D and odorant binding protein). The members of the lipocalin family are characterized by their ability to bind small lipophilic substances in their hydrophobic core, and thereby serve as transporters of substances.

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, p25, LCN2, HNL, NGAL {ECO:0000303|PubMed:8060329}
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

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:20581821, PubMed: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).

Background

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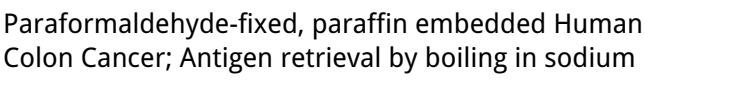
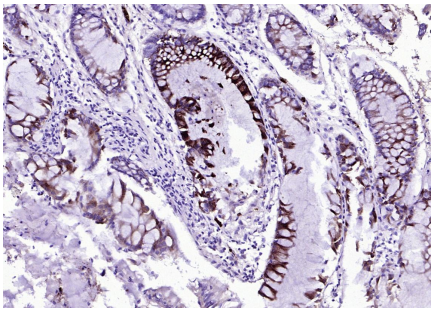
References

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).

Images



Paraformaldehyde-fixed, paraffin embedded Human Colon Cancer; Antigen retrieval by boiling in sodium



citrate buffer (pH6.0) for 15 min; The section was incubated with Lipocalin 2/NGAL Polyclonal Antibody, Unconjugated (AP52236) at 1:200 overnight at 4°C, followed by conjugation to the AP52236-HRP and DAB (C-0010) staining.