

Rat Lipocalin-2 ELISA Kit (NGAL) ab119602

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Overview

Product name	Rat Lipocalin-2 ELISA Kit (NGAL)
Detection method	Colorimetric
Sample type	Cell culture supernatant, Urine, Serum, Plasma
Assay type	Sandwich (quantitative)
Sensitivity	< 10 pg/ml
Range	78 pg/ml - 5000 pg/ml
Assay duration	Multiple steps standard assay
Species reactivity	Reacts with: Rat

Predicted to work with: Mouse, Human, Pig 

Product overview

Abcam's rat Lipocalin-2 (NGAL) *in vitro* ELISA (Enzyme-Linked Immunosorbent Assay) kit is designed for the accurate quantitative measurement of rat Lipocalin-2 in cell culture supernatants, serum plasma (heparin) and urine.

A Lipocalin-2 specific mouse monoclonal antibody for Lipocalin-2 has been precoated onto 96-well plates. Standards and test samples are added to the wells and incubated. A biotinylated detection polyclonal antibody from goat specific for Lipocalin-2 is then added followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex is added and unbound conjugates are washed away with PBS or TBS buffer. TMB is then used to visualize the HRP enzymatic reaction. TMB is catalyzed by HRP to produce a blue color product that changes into yellow after adding acidic stop solution. The density of yellow coloration is directly proportional to the rat Lipocalin-2 amount of sample captured in plate.

Platform	Microplate
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Properties

Storage instructions	Store at -20°C. Please refer to protocols.
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Components	Identifier	1 x 96 tests	1 x 96 tests
ABC Diluent Buffer	Blue Cap	1 x 12ml	1 x 12ml
Antibody Diluent Buffer	Green Cap	1 x 12ml	1 x 12ml

Components	Identifier	1 x 96 tests	1 x 96 tests
Anti-rat Lipocalin-2 antibody Microplate (12 x 8 wells)		1 unit	1 unit
Avidin-Biotin-Peroxidase Complex (ABC)		1 x 100µl	1 x 100µl
Biotinylated anti-rat Lipocalin-2 antibody		1 x 100µl	1 x 100µl
Lyophilized recombinant rat Lipocalin-2 standard		2 x 10ng	2 x 10ng
Plate Seal		4 units	4 units
Sample Diluent Buffer	Green Cap	1 x 30ml	1 x 30ml
TMB Color Developing Agent	Amber Bottle	1 x 10ml	1 x 10ml
TMB Stop Solution	Yellow Cap	1 x 10ml	1 x 10ml
Wash Buffer (25X)		1 x 20ml	1 x 20ml

Function

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.

Tissue specificity

Expressed in bone marrow and in tissues that are prone to exposure to microorganism. High expression is found in bone marrow as well as in uterus, prostate, salivary gland, stomach, appendix, colon, trachea and lung. Not found in the small intestine or peripheral blood leukocytes.

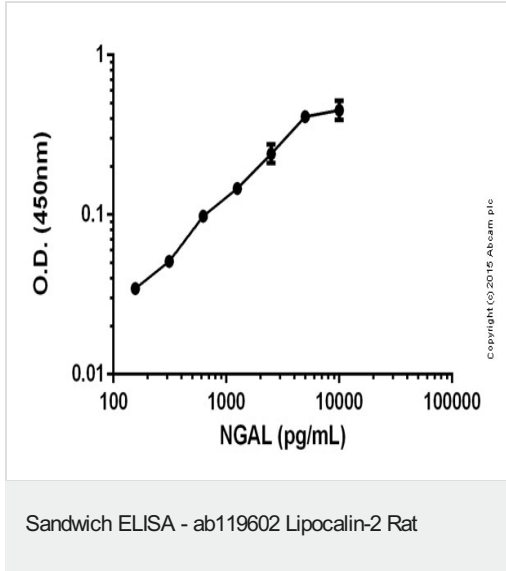
Sequence similarities

Belongs to the calycin superfamily. Lipocalin family.

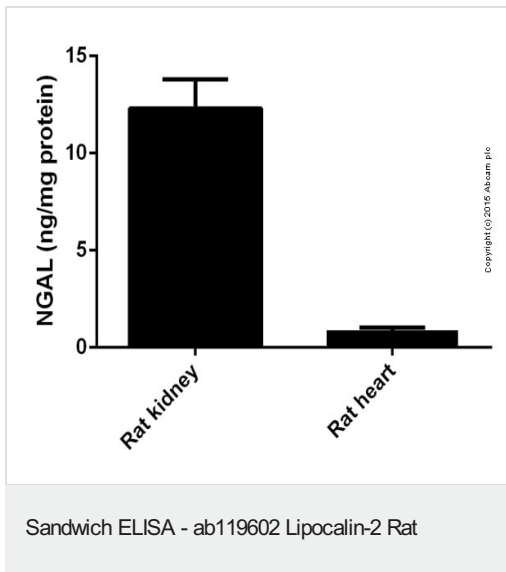
Cellular localization

Secreted. Upon binding to the SLC22A17 (24p3R) receptor, it is internalized.

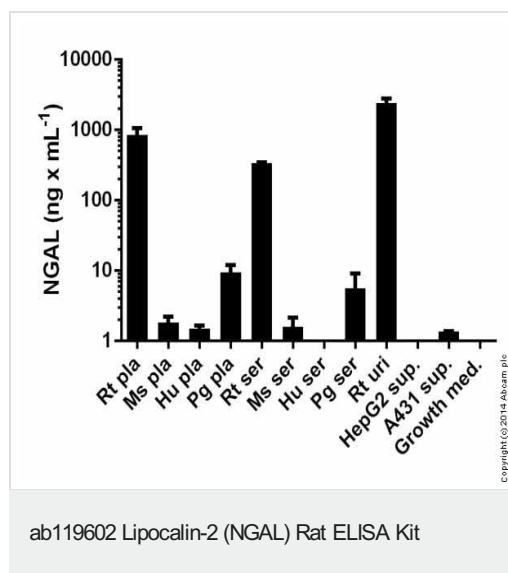
Images



Colorimetric standard curve: mean of duplicates (+/-) with background readings subtracted



NGAL (ng per mg protein) measured in tissue lysates



Lipocalin-2 measured in biological fluids showing quantity (ng) per mL of tested sample

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