

Rat NGAL Antibody Pair Set

Catalog No.	E-KAB-0008	Applications	ELISA
Synonyms	LCN2, Lipocalin 2, Oncogene 24p3, MSFI		

Kit components & Storage

Title	Specifications	Storage
Rat NGAL Capture Antibody	1 vial, 100 µg	Store at -20°C for one year. Avoid freeze / thaw cycles.
Rat NGAL Detection Antibody (Biotin)	1 vial, 50 µL	Store at -20°C for one year. Avoid freeze / thaw cycles.

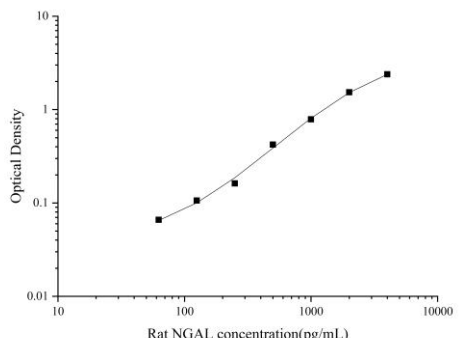
Note: Centrifuge before opening to ensure complete recovery of vial contents.

Product Information

Items		Characteristic (E-KAB-0008)	
		Rat NGAL Capture Antibody	Rat NGAL Detection Antibody (Biotin)
Immunogen Information	Immunogen	Recombinant Rat NGAL protein	Recombinant Rat NGAL protein
	Swissprot	P30152	
Product details	Reactivity	Rat	Rat
	Host	Goat	Goat
	Conjugation	Unconjugated	Biotin
	Concentration	0.5mg/mL	/
	Buffer	PBS with 0.04% Proclin 300, 50% glycerol, pH 7.4	PBS with 0.04% Proclin 300, 1% protective protein, 50% glycerol, pH 7.4
	Purify	Antigen Affinity	Antigen Affinity
	Specificity	Detects Rat NGAL in ELISAs.	

Applications

Rat NGAL Sandwich ELISA Assay:

	Recommended Concentration/Dilution	Reagent	Images														
ELISA Capture	0.5-4µg/mL	Rat NGAL Capture Antibody	 <p>The graph displays a standard curve for the Rat NGAL Sandwich ELISA Assay. The x-axis represents Rat NGAL concentration in pg/mL on a logarithmic scale from 10 to 10,000. The y-axis represents Optical Density on a logarithmic scale from 0.01 to 10. The data points show a clear upward trend, indicating that as the concentration of Rat NGAL increases, the optical density also increases.</p> <table border="1"> <caption>Approximate data points from the standard curve</caption> <thead> <tr> <th>Rat NGAL concentration (pg/mL)</th> <th>Optical Density</th> </tr> </thead> <tbody> <tr> <td>100</td> <td>0.05</td> </tr> <tr> <td>200</td> <td>0.1</td> </tr> <tr> <td>500</td> <td>0.3</td> </tr> <tr> <td>1000</td> <td>0.6</td> </tr> <tr> <td>2000</td> <td>1.2</td> </tr> <tr> <td>5000</td> <td>2.5</td> </tr> </tbody> </table>	Rat NGAL concentration (pg/mL)	Optical Density	100	0.05	200	0.1	500	0.3	1000	0.6	2000	1.2	5000	2.5
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ELISA Detection	1:1000-1:10000	Rat NGAL Detection Antibody (Biotin)															

Note: This standard curve is only for demonstration purposes. A standard curve should be generated for each assay!

Background

Iron-trafficking protein involved in multiple processes such as apoptosis, innate immunity and renal development. 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 BCL2L1/BIM, resulting in apoptosis. Involved in innate immunity, limits bacterial proliferation by sequestering iron bound to microbial siderophores, such as enterobactin. Can also bind siderophores from *M. tuberculosis*.