Rat Lipocalin-2/NGAL Alexa Fluor® 647-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF3508R
100 µg

DESCRIPTION

Species Reactivity	Rat
Specificity	Detects rat Lipocalin-2/NGAL in ELISAs and detects rat and mouse Lipocalin-2/NGAL in Western blots. In sandwich ELISAs, less than 0.4% cross-reactivity with recombinant mouse (rm) Lipocalin-2/NGAL-2 is observed and less than 0.2% cross
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant rat Lipocalin-2/NGAL Gln21-Asn198 Accession # P30152
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

ELISA Capture (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
ELISA Detection (Matched Antibody Pair)	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunoprecipitation	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Lipocalin-2, also known as neutrophil gelatinase-associated Lipocalin and uterocalin (NGAL), has been implicated in a variety of processes including cell differentiation, tumorigenesis, and apoptosis (1-3). It binds a bacterial catecholate sidropore bound to ferric ion such as enterobactin with a subnanomolar dissociation constant (K_D = 0.41 nM) (4). The bound ferric enterobactin complex breaks down slowly in a month into dihydroxybenzoyl serine and dihydroxybenzoic acid (DHBA). It also binds to a ferric DHBA complex with much less K_D values (7.9 nM) (4). Secretion of Lipocalin-2 in immune cells increases by stimulation of Toll-like receptor as a acute phase response to infection. As a result, it acts as a potent bacteriostatic reagents by sequestering iron (5). Moreover, Lipocalin-2 can alter the invasive and metastatic behavior of Ras-transformed breast cancer cells in vitro and in vivo by reversing epithelial to mesenchymal transition inducing activity of Ras, through restoration of E-cadherin expression, via effects on the Ras-MAPK signaling pathway (6). In the kidney, Lipocalin-2-mediated iron trafficking may be involved in protection from renal injury, and it has been implicated as a marker for early kidney failure (7, 8).

PRODUCT SPECIFIC NOTICES

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