

Recombinant Rat NGAL/LCN2 Protein (His Tag)



Catalog Number: PDER100016

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

Description

Synonyms	24p3;25 kDa alpha 2 microglobulin related subunit of MMP9;Alpha 2 microglobulin related protein;HGNC:6526;Lcn 2;Lipocalin-2;Migration stimulating factor inhibitor;MSFI;Oncogene 24p3;p25;Siderocalin;siderocalin LCN2;SV40 induced 24P3 protein;Uterocalin;Neutrophil Gelatinase Associated Lipocalin
Species	Rat
Expression Host	E.coli
Sequence	Gln21-Asn198
Accession	P30152-1
Calculated Molecular Weight	20.5 kDa
Observed molecular weight	21.9 kDa
Tag	N-His

Properties

Purity	> 90 % as determined by reducing SDS-PAGE.
Endotoxin	Please contact us for more information.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile PBS, pH 7.4. Normally 5 % - 8 % trehalose, mannitol and 0.01 % Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Background

Lipocalin-2 (LCN2), also known as neutrophil gelatinase-associated lipocalin (NGAL), is a 25 kDa protein belonging to the lipocalin superfamily. It was initially found in activated neutrophils, however, many other cells, like kidney tubular cells, may produce NGAL in response to various insults. This protein is released from injured tubular cells after various damaging stimuli, is already known by nephrologists as one of the most promising biomarkers of incoming Acute Kidney Injury (AKI). Recent evidence also suggests its role as a biomarker in a variety of other renal and non-renal conditions. Moreover, recent studies seem to suggest a potential involvement of this factor also in the genesis and progression of chronic kidney diseases. NGAL is the first known mammalian protein which specifically binds organic molecules called siderophores, which are high-affinity iron chelators. NGAL, first known as an antibacterial factor of natural immunity, and an acute phase protein, is currently one of the most interesting and enigmatic proteins involved in the process of tumor development. acting as an intracellular iron carrier and protecting MMP9 from proteolytic degradation, NGAL has a clear pro-tumoral effect. In thyroid carcinomas, NGAL is strongly induced by NF-κB, an important factor involved both in tumor growth and in the link between chronic inflammation and neoplastic development. Thus, Lipocalin-2 (LCN2/NGAL) has been implicated in a variety of processes including cell differentiation, proliferation, survival and morphogenesis.

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