

RECOMBINANT HUMAN NGAL

Alternative Names	Lipocalin 2 Oncogene 24p3 Human Neutrophil gelatinase-associated lipocalin
Uniprot Entry	P80188
Source	Recombinant from <i>Pichia pastoris</i>
Suggested Applications	Control Manufacture, Life Science, Clinical Chemistry, Biosensors, ELISA Assay, Lateral Flow, Academic Research

Protein Function	NGAL is a member of the lipocalin proteins family, expressed predominantly in neutrophils, but also kidney, prostate and epithelial tissues. The function of NGAL in the human body is not fully understood, however it is believed to act as an innate antibacterial factor. ⁽¹⁾ It is up regulated in cells under stress from inflammation, bacterial infection, neoplastic conditions and renal disorders.	
Tissue Occurrence & Abundance	NGAL is a small naturally protease resistant polypeptide that is readily detected in blood and Urine. ⁽²⁾ Levels of NGAL can be seen to rise within 2 hours or less during acute kidney injury (caused by ischemia or nephrotoxicity).	
Function in Disease	NGAL is a new early marker for acute kidney injury. Levels rise rapidly after renal injury and have been used in a variety of clinical situations including intensive care, emergency medicine, renal transplantation and procedures involving the use of i.v.contrast media and other nephrotoxic agents. Studies have indicated that this marker has the greatest potential for the prediction and monitoring of acute renal injury following cardiac surgery. ⁽³⁾ This potential has now been expanded upon, with development and commercialisation of highly specific ELISA testing kits.	
Structure based on Uniprot entry	Predicted Molecular Weight	20.5 kDa
	Amino Acids	178
	Disulphide Bonds	1
	Glycosylation	Yes (N-linked)

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References

1. Davide Bolignano, et al. (2008) Neutrophil Gelatinase–Associated Lipocalin (NGAL) as a Marker of Kidney Damage, American Journal of Kidney Diseases, 52, 595-604
2. C Yeo , MD, R Khurana , MD, PhD, FESC (2011) Neutrophil Gelatinase Associated Lipocalin: An Emerging Biomarker for Acute Kidney Injury in Cardiovascular Disease
3. Jaya Mishra PhD, et al. (2005) Neutrophil gelatinase-associated lipocalin (NGAL) as a biomarker for acute renal injury after cardiac surgery, The Lancet, 365, 1231-1238

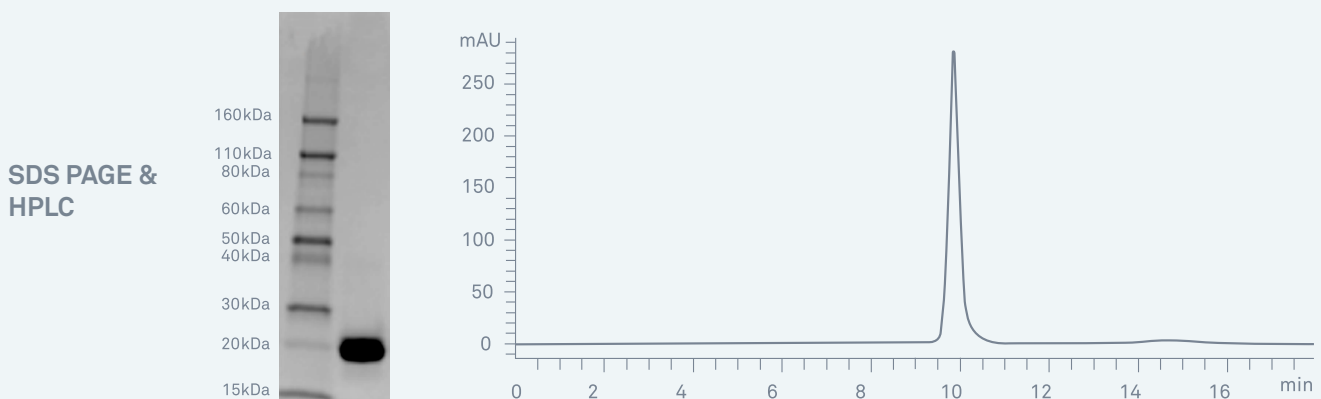
WHY RECOMBINANT NGAL?

- + **High purity:** A protein purity of >96% minimises the risk of interferences due to contaminants.
- + **High specificity to kidney injury:** Low dimer content ensures the NGAL protein is specific for kidney damage.
- + A faster response time, compared to other standard AKI biomarkers such as Serum Creatinine.
- + **Secure supply chain:** A recombinant protein ensures supply sustainability since it is not dependent on biological raw material.
- + **High quality:** Manufactured in the UK, under ISO 9001 quality management system.

Purity	> 96% pure
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Stability & Formulation	Lyophilised – Store below -15°C
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SEC HPLC shows one peak corresponding to NGAL monomer



Dispensations	100 µg, 1 mg and 10 mg
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ORDERING DETAILS – USE THE FOLLOWING CODE WHEN ORDERING

Product	Code	Description
rec Human NGAL	P722-1	> 96% pure supplied lyophilised from 0.02M NH ₄ HCO ₃ expressed from (<i>Pichia pastoris</i>)

Order a sample today sales@bbisolutions.com

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