

Product Specification Sheet

Human neutrophil gelatinase-associated lipocalin (NGAL) IgG antibodies and controls

<input type="checkbox"/> Cat. # NGAL11-M	Monoclonal Anti-Human neutrophil gelatinase-associated lipocalin IgG	SIZE: 100 ug
<input type="checkbox"/> Cat. # NGAL11-C	Recombinant Human NGAL protein control for Western blot	SIZE: 100 ul

Lipocalin-2 (NGAL/Lipocalin-2/LCN2), also known as oncogene 24p3 or neutrophil gelatinase-associated lipocalin (NGAL), is a protein that in humans is encoded by the LCN2 gene. NGAL is involved in innate immunity by sequestering iron that in turn limits bacterial growth. It is expressed in neutrophils and in low levels in the kidney, prostate, and epithelia of the respiratory and alimentary tracts. NGAL is used as a biomarker of kidney injury. The binding of NGAL to bacterial siderophores is important in the innate immune response to bacterial infection. Upon encountering invading bacteria the toll-like receptors on immune cells stimulate the synthesis and secretion of NGAL. Secreted NGAL then limits bacterial growth by sequestering iron-containing siderophores. Lipocalin-2 also functions as a growth factor. Renal expression of NGAL increases in the kidneys after injury for a variety of reasons. The level of NGAL in the urine and plasma increases within 2 hours of kidney injury. It is possible to measure NGAL in serum or urine in the range of 25 to 5,000 ng/mL. Low levels for NGAL have been considered to be 20 ng/mL, medium levels 200 ng/mL, and high levels 1200 ng/mL.

Neutrophil Gelatinase Associated Lipocalin (NGAL) belongs to a family of lipocalins which include 25 proteins (including a1-microglobulin and b-lactoglobulin), which are characterized by their ability to bind small lipophilic substances in their hydrophobic core. They function serve as transporters of substances like retinal, biliverdins & prostaglandins. There are indications that NGAL is involved in modulation of the inflammatory response and is found in the plasma of patients after stroke

Source of Antigen and Antibodies

Antigen	purified NGAL
Ab Host/type	Mouse monoclonal IgG # NGAL11-M; In PBS, 7.4, and 0.01% azide
2-Ab	Goat Anti-mouse IgG-HRP conjugate Cat # 40320 (AP, biotin, FITC conjugates also available)
-ve control IgG	Cat # 20008-1, Mouse (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as -ve control

Human NGAL was expressed as His-tag protein and purified (>95%, 27 kda). For Western blot +ve control (**Cat # NGAL11-C**) is supplied in SDS-PAGE sample buffer (reduced). Load 10 ul/lane of **NGAL11-C** for good visibility with antibody Cat # **NGAL11-M**. Store at -20oC in suitable size aliquots. SDS may crystallize in cold conditions. It should redissolve by warming before taking it from the stock. It should be heated once prior to loading on gels. If the product has been stored for several weeks, then it may be preferable to add 5 ul of fresh 2x sample buffer per 10 ul of the **NGAL11-C** solution prior to heating and loading on gels. This preparation is not biologically active. It is not suitable for ELISA or other applications where native protein is required. It should not be used as quantitative standards as this is only meant to serve as mol. wt marker for the light chain. Do not freeze, thaw, or heat repeatedly.

Form & Storage of Antibodies/Peptide Control

Antibody purified)

100ul solution lyophilized powder
Supplied in Buffer: PBS/azide
Reconstitute powder in 100 ul water

Stability: Store powder at -20oC for 2-3 years.

Recommended Usage

Western Blotting 1-2 ug/ml using Chemiluminescence technique).

ELISA (1:0.1-2 ug/ml using 50-100 ng of control protein/well).

Histochemistry & Immunofluorescence: We recommend the use of 1:50 using formalin-fixed paraffin embedded tissues or 4% paraformaldehyde fixed frozen sections.

Specificity & Cross-reactivity

The antibodies react with human NGAL. Other species not tested. Recombinant purified NGAL is available to be used as positive control (#NGAL11-C).

References: Kjedsen L (1993) JBC 268, 10425-10432; Chan P (1994) Genomics 23, 145-150; Cowland JB (1997) Genomics 45, 1723; Fiedl A (1999) Histochem. J. 31, 433-441; Devrajan P (2010) Nephrology 15, 419-428

*This product is for In vitro research use only.

Related material available from ADI

Catalog# ProdDescription
NGAL15-R-50 Human recombinant (yeast) neutrophil gelatinase-associated lipocalin (NGAL/Lipocalin-2/LCN2) (21 kda, >95%)

RP-383 Recombinant (E. coli) Human Neutrophil Gelatinase Associated Lipocalin/Lipocalin-2 (his-tag, 28 kda, >95%)

NGAL11-C Recombinant Human neutrophil gelatinase-associated lipocalin (NGAL/Lipocalin-2/LCN2) protein control for Western blot

NGAL11-M 140424A