

**Anti-NGAL (human, neutrophil gelatinase-associated lipocalin)  
 Mouse monoclonal antibody**

Subclass: IgG1/k

**PRODUCT NO.**
**HYB 211-02**
**PRESENTATION**

Preparation: Protein-A purified  
 Content: Available in 200 µL and 1 mL volumes, 1 mg/mL  
 Solvent: 0.01 M phosphate buffer, pH 7.4, containing 0.5 M NaCl and 15 mM sodium azide  
 Storage: In the dark at 4-8°C

**ANTIGEN**

Neutrophil gelatinase-associated lipocalin (NGAL; also called lipocalin 2, siderocalin and neutrophil lipocalin) is a member of the lipocalin family of proteins which bind and transport small lipophilic molecules. NGAL is released by activated neutrophils and occurs as 25-kDa glycosylated single protein chain monomers, which form dimers and small amounts of higher oligomers, as well as complexes with matrix metalloproteinase 9 (MMP-9; gelatinase B) (1). Low level expression of NGAL in a variety of epithelia may be increased in inflammation or cancers (2). The expression and release of NGAL from renal tubules are dramatically increased by ischemic or nephrotoxic injury (3).

**IMMUNOGEN**

Human recombinant NGAL in monomer and dimer forms adsorbed to aluminium hydroxide gel (4).

**SPECIFICITY**

HYB 211-02 is specific for human NGAL, and cross-reacts with cynomolgus monkey (*Macaca fascicularis*) NGAL.

**EPITOPE SPECIFICITY**

Epitope specificity differs from that of HYB 211-01 and HYB 211-05.

**REACTIVITY**

HYB 211-02 reacts strongly with human NGAL. Strong reaction is seen when used as detection antibody in sandwich ELISA in combination with a polyclonal NGAL capture antibody and when tested on recombinant NGAL coated directly onto the well. HYB 211-02 reacts with NGAL in immunochemical staining of paraformaldehyde-fixed sections containing neutrophils. In Western blotting of SDS-PAGE gels, HYB 211-02 reacts with NGAL in both reduced and unreduced forms (4).

HYB 211-02 (as biotinylated detection antibody) forms a sandwich pair with ABS 038-23 (as capture antibody) for measuring cynomolgus monkey (*Macaca fascicularis*) and human NGAL.

**CULTURE MEDIUM**

RPMI 1640 with 10% fetal calf serum

**FUSION PARTNER**

X63-Ag8.653

**IMMUNIZATION**

Female CF1 x BALB/c mice immunized by intraperitoneal injection

**APPLICATION**

Method	Usability	Dilution guideline	References
ELISA	Yes	1/8000	4
Immunoblotting	Yes	1/50	4
Immunohistochemistry	Yes		4

The dilution guideline for ELISA is based on use as detection antibody for antigen coated at 0.5 µg/ml. Users should determine the optimal dilutions for their own purposes.

**REFERENCES**

- Kjeldsen L, Johnsen AH, Sengeløv H, Borregaard N (1993) Isolation and primary structure of NGAL, a novel protein associated with human neutrophil gelatinase. *J Biol Chem* 268:10425-10432.
- Nielsen BS, Borregaard N, Bundgaard JR, Timshel S, Sehested M, Kjeldsen L (1996) Induction of NGAL synthesis in epithelial cells of human colorectal neoplasia and inflammatory bowel diseases. *Gut* 38:414-420.
- Mishra J, Ma Q, Prada A, Mitsnefes M, Zahedi K, Yang J, Barasch J, Devarajan P (2003) Identification of neutrophil gelatinase-associated lipocalin as a novel early urinary biomarker for ischemic renal injury. *J Am Soc Nephrol* 14:2534-2543.
- Kjeldsen L, Koch C, Arnljots K, Borregaard N (1996) Characterization of two ELISAs for NGAL, a newly described lipocalin in human neutrophils. *J Immunol Methods* 198:155-164.

Further examples of use, please consult NGAL reference booklet at [www.bioporto.com](http://www.bioporto.com)

**CONDITIONS**

All products are supplied on the understanding that they are for in vitro use only. The information and product are offered without guarantee as the ultimate conditions of use are beyond our control. The animals from which this product was derived have not been exposed to or inoculated with any livestock or poultry disease agents exotic to the United States or Western Europe, and did not originate from facilities where work with exotic disease agents affecting livestock or avian species is carried out.