

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

PRODUCT NO.

HYB 211-01

Subclass: IgG₁/k

Clone: 5G5

PRESENTATION

Preparation: Protein-A/G purified

Content: Available in 200 µL and 1 mL size. 1 mg/mL +/- 15%. See Certificate of Analysis for

Solvent: 0.01 M phosphate buffer, pH 7.4, containing 0.5 M NaCl and 15 mM sodium azide

Storage: 4-8°C without exposure to light. No precautions necessary during handling.

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). Expression of NGAL in the kidney is dramatically increased by acute kidney injury (3).

IMMUNOGEN

Human recombinant NGAL in monomer and dimer forms adsorbed to aluminium hydroxide gel

SPECIFICITY

HYB 211-01 is specific for human NGAL. No cross-reaction with NGAL from other species has been detected.

EPI TOPE SPECIFICITY

Epitope specificity differs from that of HYB 211-02.

REACTIVITY

HYB 211-01 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 211-01 reacts with NGAL in immunochemical staining of paraformaldehyde-fixed sections containing neutrophils. In Western blotting of SDS-PAGE gels, HYB 211-01 reacts with NGAL in both reduced and unreduced forms. A dilution guideline of 1/500 has proved successful (4).

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	References
ELISA	Yes	4
Immunoblotting	Yes	4
Immunohistochemistry	Yes	4, 5

REFERENCES

1. 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.
2. 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.
3. Matthaeus T, Schulze-Lohoff E, Ichimura T, Weber M, Andreucci M, Park KM, Alessandrini A, Bonventre JV (2001) Co-regulation of neutrophil gelatinase-associated lipocalin and matrixmetalloproteinase-9 in the postischemic rat kidney. *J Am Soc Nephrol* 12:787A.
4. 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.
5. Tong Z, Kunnumakkara AB, Wang H, Matsuo Y, Diagaradjane P, Harikumar KB, Ramachandran V, Sung B, Chakraborty A, Bresalier RS, Logsdon C, Aggarwal BB, Krishnan S, Guha S (2008) Neutrophil Gelatinase-Associated Lipocalin: A Novel Suppressor of Invasion and Angiogenesis in Pancreatic Cancer. *Canc Res* 68: 6100-6108.

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