

# NGAL (C-14): sc-18695

## BACKGROUND

In addition to the monomeric mammalian progelatinase, two additional forms of progelatinase have been identified. The shorter of these additional forms is a covalently linked, disulfide-bridged protein that heterodimerizes with a short protein; an  $\alpha$ 2-Microglobulin-related protein known as neutrophil gelatinase-associated lipocalin (NGAL), which is moderately expressed in breast and lung tissues. NGAL belongs to the lipocalin family and has a high degree of similarity with rat  $\alpha$ 2-Microglobulin-related protein and mouse protein 24p3. NGAL is able to bind a derivative of the bacterial chemotactic peptide, suggesting that it has important immuno-modulatory functions. NGAL has been described as an inflammatory protein; it is released into the circulation as a result of the inflammatory activation of leukocytes initiated by the extra-corporeal circulation. In addition, NGAL synthesis is induced in epithelial cells in inflammatory and neoplastic colorectal diseases. In conclusion, NGAL may serve as a scavenger of bacterial products to function in the anti-inflammatory process.

## REFERENCES

1. Triebel, S., et al. 1992. A 25 kDa  $\alpha$ 2-Microglobulin-related protein is a component of the 125 kDa form of human gelatinase. *FEBS Lett.* 314: 386-388.
2. Kjeldsen, L., et al. 1993. Isolation and primary structure of NGAL, a novel protein associated with human neutrophil gelatinase. *J. Biol. Chem.* 268: 10425-10432.
3. Bundgaard, J.R., et al. 1994. Molecular cloning and expression of a cDNA encoding NGAL: a lipocalin expressed in human neutrophils. *Biochem. Biophys. Res. Comm.* 202: 1468-1475.
4. Nielsen, B.S., et al. 1996. Induction of NGAL synthesis in epithelial cells of human colorectal neoplasia and inflammatory bowel diseases. *Gut* 38: 414-420.
5. Stoesz, S.P., et al. 1998. Heterogeneous expression of the lipocalin NGAL in primary breast cancers. *Int. J. Cancer* 79: 565-572.
6. Jonsson, P., et al. 1999. Extracorporeal circulation causes release of neutrophil gelatinase-associated lipocalin (NGAL). *Mediators Inflamm.* 8: 169-171.

## CHROMOSOMAL LOCATION

Genetic locus: LCN2 (human) mapping to 9q34.11.

## SOURCE

NGAL (C-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of NGAL of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-18695 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

NGAL (C-14) is recommended for detection of NGAL of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for NGAL siRNA (h): sc-43969, NGAL shRNA Plasmid (h): sc-43969-SH and NGAL shRNA (h) Lentiviral Particles: sc-43969-V.

Molecular Weight of NGAL: 23 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **NGAL (5G5): sc-57517**, our highly recommended monoclonal alternative to NGAL (C-14).