

# NGAL (2C10): sc-57516

## 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 immunomodulatory 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

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6. Stoesz, S.P., Friedl, A., Haag, J.D., Lindstrom, M.J., Clark, G.M. and Gould, M.N. 1998. Heterogeneous expression of the lipocalin NGAL in primary breast cancers. *Int. J. Cancer* 79: 565-572.
7. Jonsson, P., Stahl, M.L. and Ohlsson, K. 1999. Extracorporeal circulation causes release of neutrophil gelatinase-associated lipocalin (NGAL). *Mediators Inflamm.* 8: 169-171.
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## CHROMOSOMAL LOCATION

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

## SOURCE

NGAL (2C10) is a mouse monoclonal antibody raised against NGAL from neutrophils of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

NGAL (2C10) is recommended for detection of NGAL of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000).

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 goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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.

## SELECT PRODUCT CITATIONS

1. Roudkenar, M.H., Roudkenar, M.H., Halabian, R., Roushandeh, A.M., Nourani, M.R., Masroori, N., Ebrahimi, M., Nikogoftar, M., Rouhbakhsh, M., Bahmani, P., Najafabadi, A.J. and Shokrgozar, M.A. 2009. Lipocalin 2 regulation by thermal stresses: protective role of Lcn2/NGAL against cold and heat stresses. *Exp. Cell Res.* 315: 3140-3151.

## 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.