

NGAL (H-4): sc-518095

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 α 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 α 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 extracorporeal 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 α 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. Commun.* 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.

CHROMOSOMAL LOCATION

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

SOURCE

NGAL (H-4) is a mouse monoclonal antibody raised against amino acids 58-187 mapping within an internal region of NGAL of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

NGAL (H-4) is available conjugated to agarose (sc-518095 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-518095 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-518095 PE), fluorescein (sc-518095 FITC), Alexa Fluor[®] 488 (sc-518095 AF488), Alexa Fluor[®] 546 (sc-518095 AF546), Alexa Fluor[®] 594 (sc-518095 AF594) or Alexa Fluor[®] 647 (sc-518095 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-518095 AF680) or Alexa Fluor[®] 790 (sc-518095 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

NGAL (H-4) is recommended for detection of NGAL of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], 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).

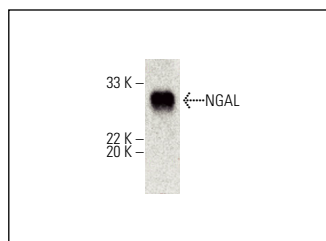
Suitable for use as control antibody for NGAL siRNA (h): sc-43969, NGAL shRNA Plasmid (h): sc-43969-SH and NGAL shRNA (h) Lentiviral Particles: sc-43969-V.

Molecular Weight of NGAL: 23 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



NGAL (H-4): sc-518095. Western blot analysis of human recombinant NGAL. Detection reagent used: m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM.

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 for detailed protocols and support products.