

NGAL (H-7): sc-515876



The Power to Question

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 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.

CHROMOSOMAL LOCATION

Genetic locus: Lcn2 (mouse) mapping to 2 B.

SOURCE

NGAL (H-7) is a mouse monoclonal antibody raised against amino acids 17-161 mapping within an internal region of NGAL of mouse 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-7) is available conjugated to agarose (sc-515876 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515876 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515876 PE), fluorescein (sc-515876 FITC), Alexa Fluor[®] 488 (sc-515876 AF488), Alexa Fluor[®] 546 (sc-515876 AF546), Alexa Fluor[®] 594 (sc-515876 AF594) or Alexa Fluor[®] 647 (sc-515876 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-515876 AF680) or Alexa Fluor[®] 790 (sc-515876 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

NGAL (H-7) is recommended for detection of NGAL of mouse and rat 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), immunohistochemistry (including paraffin-embedded sections) (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 (m): sc-60044, NGAL shRNA Plasmid (m): sc-60044-SH and NGAL shRNA (m) Lentiviral Particles: sc-60044-V.

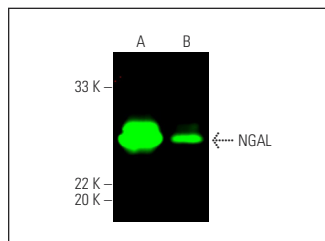
Molecular Weight of NGAL: 23 kDa.

Positive Controls: mouse spleen extract: sc-2391 or mouse bone marrow extract: sc-394627.

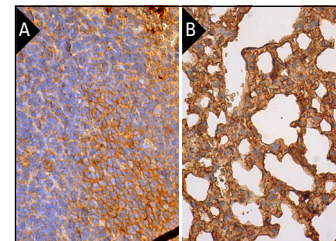
STORAGE

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

DATA



NGAL (H-7): sc-515876. Near-infrared western blot analysis of NGAL expression in mouse bone marrow (A) and mouse spleen (B) tissue extracts. Blocked with UltraCruz[®] Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 680: sc-516180.



NGAL (H-7): sc-515876. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse spleen tissue showing cytoplasmic staining of cells in white pulp and cells in red pulp (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse lung tissue showing cytoplasmic and membrane staining of pneumocytes, cytoplasmic staining of macrophages and connective tissue staining (B).

SELECT PRODUCT CITATIONS

- Xue, X., et al. 2017. Quantitative proteomics identifies STEAP4 as a critical regulator of mitochondrial dysfunction linking inflammation and colon cancer. *Proc. Natl. Acad. Sci. USA* 114: E9608-E9617.
- Adeosun, S.O., et al. 2018. Loss of biliverdin reductase-A promotes lipid accumulation and lipotoxicity in mouse proximal tubule cells. *Am. J. Physiol. Renal Physiol.* 315: F323-F331.
- Yu-Lee, L.Y., et al. 2019. Bone secreted factors induce cellular quiescence in prostate cancer cells. *Sci. Rep.* 9: 18635.
- Elsakka, E.G.E., et al. 2020. Androgen/androgen receptor affects Gentamicin-induced nephrotoxicity through regulation of megalin expression. *Life Sci.* 251: 117628.
- Kim, J.Y., et al. 2020. Protective effects of SPA0355, a thiourea analogue, against lipopolysaccharide-induced acute kidney injury in mice. *Antioxidants* 9: 585.
- Ashrafi Jigheh, Z., et al. 2020. Empagliflozin attenuates renal and urinary markers of tubular epithelial cell injury in streptozotocin-induced diabetic rats. *Indian J. Clin. Biochem.* 35: 109-114.
- Akakpo, J.Y., et al. 2020. 4-methylpyrazole protects against acetaminophen-induced acute kidney injury. *Toxicol. Appl. Pharmacol.* 409: 115317.
- García-Arroyo, F.E., et al. 2020. Restricted water intake and hydration with fructose-containing beverages during infancy predispose to aggravate an acute renal ischemic insult in adolescent rats. *Biomed Res. Int.* 2020: 4281802.

RESEARCH USE

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

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