SANTA CRUZ BIOTECHNOLOGY, INC.

NGAL (H-7): sc-515876

SANTA CRUZ BIOTECHNOLOGY

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 µg IgG_1 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 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515876 HRP), 200 µg/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 µg/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 µg/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 µg per 100-500 µg 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.

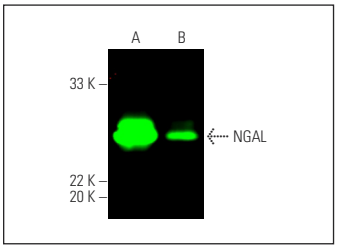
Molecular Weight of NGAL: 23 kDa.

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

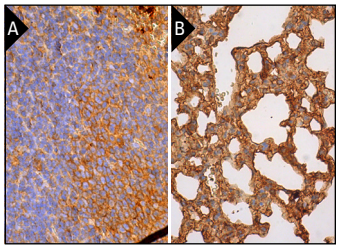
STORAGE

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

1. 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.
2. 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.
3. Yu-Lee, L.Y., et al. 2019. Bone secreted factors induce cellular quiescence in prostate cancer cells. Sci. Rep. 9: 18635.
4. Elsakka, E.G.E., et al. 2020. Androgen/androgen receptor affects Gentamicin-induced nephrotoxicity through regulation of megalin expression. Life Sci. 251: 117628.
5. Kim, J.Y., et al. 2020. Protective effects of SPA0355, a thiourea analogue, against lipopolysaccharide-induced acute kidney injury in mice. Antioxidants 9: 585.
6. Akakpo, J.Y., et al. 2020. 4-methylpyrazole protects against acetaminophen-induced acute kidney injury. Toxicol. Appl. Pharmacol. 409: 115317.
7. 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.
8. García-Arroyo, F.E., et al. 2021. Osthol ameliorates kidney damage and metabolic syndrome induced by a high-fat/high-sugar diet. Int. J. Mol. Sci. 22: 2431.

RESEARCH USE

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