SANTA CRUZ BIOTECHNOLOGY, INC.

Calgranulin B (B-5): sc-376772

The Power to Question

BACKGROUND

The family of EF-hand type Ca^{2+}-binding proteins includes Calbindin (previously designated vitamin D-dependent Ca^{2+}-binding protein), S-100α and β, Calgranulin A (also designated MRP8), Calgranulin B (also designated MRP14) and Calgranulin C (S-100 like protein), and the parvalbumin family members, including parvalbumin α and parvalbumin β (also designated oncomodulin). Calbindin, S-100 proteins and parvalbumin proteins are each expressed in neural tissues. In addition, S-100α and β are present in a variety of other tissues, and Calbindin is present in intestine and kidney. Parvalbumin α is also found in fast-contracting/relaxing skeletal muscle fibers and parvalbumin β is found in many tumor tissues as well as in the organ of Corti. Calbindin, S-100 proteins and parvalbulmins have all been detected in leydig cells and testis. These proteins are thought to play a role in hormone production and spermatogenesis. Calgranulin is expressed in macrophages and epithelial cells.

REFERENCES

1. van Heyningen, V., et al. 1985. Tissue localization and chromosomal assignment of a serum protein that tracks the cystic fibrosis gene. Nature 315: 513-515.
2. Hayward, C., et al. 1986. Monoclonal antibodies to cystic fibrosis antigen. J. Immunol. Methods 91: 117-122.

CHROMOSOMAL LOCATION

Genetic locus: S100A9 (human) mapping to 1q21.3.

SOURCE

Calgranulin B (B-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 63-99 near the C-terminus of Calgranulin B of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Calgranulin B (B-5) is available conjugated to agarose (sc-376772 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376772 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376772 PE), fluorescein (sc-376772 FITC), Alexa Fluor® 488 (sc-376772 AF488), Alexa Fluor® 546 (sc-376772 AF546), Alexa Fluor® 594 (sc-376772 AF594) or Alexa Fluor® 647 (sc-376772 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376772 AF680) or Alexa Fluor® 790 (sc-376772 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376772 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

STORAGE

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

APPLICATIONS

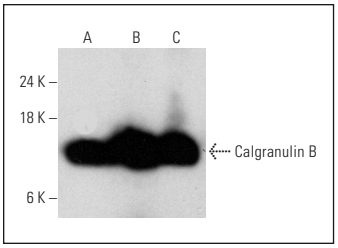
Calgranulin B (B-5) is recommended for detection of Calgranulin B of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) 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 Calgranulin B siRNA (h): sc-43344, Calgranulin B shRNA Plasmid (h): sc-43344-SH and Calgranulin B shRNA (h) Lentiviral Particles: sc-43344-V.

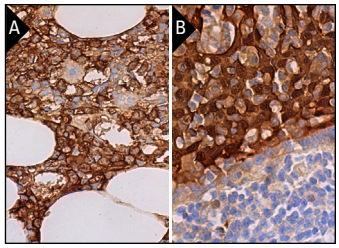
Molecular Weight of Calgranulin B: 14 kDa.

Positive Controls: human tonsil tissue extract: sc-364263, human spleen extract: sc-363779 or HL-60 + DMSO cell lysate: sc-24703.

DATA



Calgranulin B (B-5) HRP: sc-376772 HRP. Direct western blot analysis of Calgranulin B expression in HL-60 + DMSO whole cell lysate (**A**) and human spleen (**B**) and human tonsil (**C**) tissue extracts.



Calgranulin B (B-5): sc-376772. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bone marrow tissue showing cytoplasmic and membrane staining of hematopoietic cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing cytoplasmic, membrane and nuclear staining of squamous epithelial cells (**B**).

SELECT PRODUCT CITATIONS

1. Cortés-Malagón, E.M., et al. 2013. Gene expression profile regulated by the HPV16 E7 oncoprotein and estradiol in cervical tissue. Virology 447: 155-165.
2. Schenten, V., et al. 2018. Secretion of the phosphorylated form of S100A9 from neutrophils is essential for the proinflammatory functions of extracellular S100A8/A9. Front. Immunol. 9: 447.
3. Jung, N., et al. 2019. miRNAs regulate cytokine secretion induced by phosphorylated S100A8/A9 in neutrophils. Int. J. Mol. Sci. 20: 5699.
4. Schlecht, A., et al. 2020. Transcriptomic characterization of human choroidal neovascular membranes identifies calprotectin as a novel biomarker for patients with age-related macular degeneration. Am. J. Pathol. 190: 1632-1642.
5. Leri, M., et al. 2021. Natural compound from olive oil inhibits S100A9 amyloid formation and cytotoxicity: implications for preventing Alzheimer's disease. ACS Chem. Neurosci. 12: 1905-1918.

RESEARCH USE

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