

Calgranulin B (MRP 1H9): sc-53187



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-100 α 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-100 α 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 parvalbumins 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.

CHROMOSOMAL LOCATION

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

SOURCE

Calgranulin B (MRP 1H9) is a mouse monoclonal antibody raised against recombinant MRP-14 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.

Calgranulin B (MRP 1H9) is available conjugated to agarose (sc-53187 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53187 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53187 PE), fluorescein (sc-53187 FITC), Alexa Fluor[®] 488 (sc-53187 AF488), Alexa Fluor[®] 546 (sc-53187 AF546), Alexa Fluor[®] 594 (sc-53187 AF594) or Alexa Fluor[®] 647 (sc-53187 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-53187 AF680) or Alexa Fluor[®] 790 (sc-53187 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Calgranulin B (MRP 1H9) is recommended for detection of Calgranulin B of human origin by Western Blotting (starting dilution 1:200, 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 Calgranulin B siRNA (h): sc-43344, Calgranulin B shRNA Plasmid (h): sc-43344-SH and Calgranulin B shRNA (h) Lentiviral Particles: sc-43344-V.

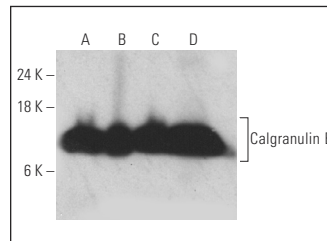
Molecular Weight of Calgranulin B: 14 kDa.

Positive Controls: human esophagus extract: sc-363760, human spleen extract: sc-363779 or human tonsil tissue extract: sc-364263.

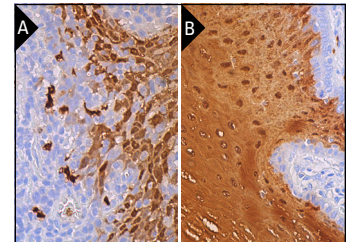
STORAGE

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

DATA



Calgranulin B (MRP 1H9) HRP: sc-53187 HRP. Direct western blot analysis of Calgranulin B expression in human esophagus (A), human spleen (B), human tonsil (C) and human PBL (D) tissue extracts.



Calgranulin B (MRP 1H9): sc-53187. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil (A) and human oral mucosa (B) tissue showing cytoplasmic and nuclear staining of squamous epithelial cells.

SELECT PRODUCT CITATIONS

- Zhu, H., et al. 2013. Roles of galectin-7 and S100A9 in cervical squamous carcinoma: clinicopathological and *in vitro* evidence. *Int. J. Cancer* 132: 1051-1059.
- Costa, M., et al. 2015. Lymphocyte gene expression signatures from patients and mouse models of hereditary hemochromatosis reveal a function of HFE as a negative regulator of CD8⁺ T-lymphocyte activation and differentiation *in vivo*. *PLoS ONE* 10: e0124246.
- Val, S., et al. 2016. Proteomic characterization of middle ear fluid confirms neutrophil extracellular traps as a predominant innate immune response in chronic otitis media. *PLoS ONE* 11: e0152865.
- Fujita, Y., et al. 2018. Regulation of S100A8 stability by RNF5 in intestinal epithelial cells determines intestinal inflammation and severity of colitis. *Cell Rep.* 24: 3296-3311.
- Ohata, H., et al. 2019. NOX1-dependent mTORC1 activation via S100A9 oxidation in cancer stem-like cells leads to colon cancer progression. *Cell Rep.* 28: 1282-1295.
- Vivanco Gonzalez, N., et al. 2022. An optimized protocol for phenotyping human granulocytes by mass cytometry. *STAR Protoc.* 3: 101280.

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.