

Calgranulin B (47-8D3): sc-58706

BACKGROUND

The family of EF-hand type Ca²⁺-binding proteins includes Calbindin (previously designated vitamin D-dependent Ca²⁺-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; S100a9 (mouse) mapping to 3 F1.

SOURCE

Calgranulin B (47-8D3) is a mouse monoclonal antibody raised against peripheral blood monocyte components 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.

APPLICATIONS

Calgranulin B (47-8D3) is recommended for detection of Calgranulin B of mouse, rat and 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), flow cytometry (1 μ g per 1 x 10⁶ cells) 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 siRNA (m): sc-43345, Calgranulin B shRNA Plasmid (h): sc-43344-SH, Calgranulin B shRNA Plasmid (m): sc-43345-SH, Calgranulin B shRNA (h) Lentiviral Particles: sc-43344-V and Calgranulin B shRNA (m) Lentiviral Particles: sc-43345-V.

Molecular Weight of Calgranulin B: 14 kDa.

Positive Controls: HL-60 whole cell lysate: sc-2209, HL-60 + DMSO cell lysate: sc-24703 or human PBL whole cell lysate.

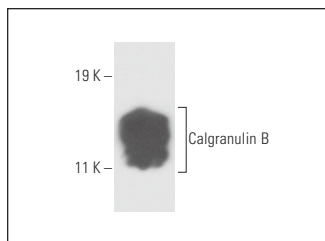
STORAGE

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.

DATA



Calgranulin B (47-8D3): sc-58706. Western blot analysis of Calgranulin B expression in human PBL whole cell lysate.

SELECT PRODUCT CITATIONS

- Yang, W.S., et al. 2012. Proteomic approach reveals FKBP4 and S100A9 as potential prediction markers of therapeutic response to neoadjuvant chemotherapy in patients with breast cancer. *J. Proteome Res.* 11: 1078-1088.
- Duan, L., et al. 2013. S100A8 and S100A9 are associated with colorectal carcinoma progression and contribute to colorectal carcinoma cell survival and migration via Wnt/ β -catenin pathway. *PLoS ONE* 8: e62092.
- Wu, R., et al. 2013. S100A9 promotes the proliferation and invasion of Hep G2 hepatocellular carcinoma cells via the activation of the MAPK signaling pathway. *Int. J. Oncol.* 42: 1001-1010.
- Duan, L., et al. 2018. HBx-induced S100A9 in NF κ B dependent manner promotes growth and metastasis of hepatocellular carcinoma cells. *Cell Death Dis.* 9: 629.
- Alkhateeb, T., et al. 2020. Long non-coding RNA hotairm1 promotes S100A9 support of MDSC expansion during sepsis. *J. Clin. Cell. Immunol.* 11: 600.
- Bah, I., et al. 2022. Inhibiting KDM6A demethylase represses long non-coding RNA hotairm1 transcription in MDSC during sepsis. *Front. Immunol.* 13: 823660.
- Zhan, X., et al. 2023. Elevated neutrophil extracellular traps by HBV-mediated S100A9-TLR4/RAGE-ROS cascade facilitate the growth and metastasis of hepatocellular carcinoma. *Cancer Commun.* 43: 225-245.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.



See **Calgranulin B (B-5): sc-376772** for Calgranulin B antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.