SANTA CRUZ BIOTECHNOLOGY, INC.

Calgranulin C (19F5): sc-101347

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, Calgranulins A (also designated MRP8), B (also designated MRP14) and C (S-100 like proteins) 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 parvalbulmins have all been detected in leydig cells and the testis. These proteins are thought to play a role in hormone production and spermatogenesis. Calgranulin is expressed in macrophages and epithelial cells.

REFERENCES

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2. Kagi, U., et al. 1988. Developmental appearance of the Ca^{2+}-binding proteins parvalbumin, Calbindin D28K, S-100 proteins and calmodulin during testicular development in the rat. Cell Tissue Res. 252: 359-365.
3. Heizmann, C.W. 1988. Calcium-binding proteins of the EF-type. J. Cardiovasc. Pharmacol. 12: S30-S37.
4. Hogg, N., et al. 1989. Monoclonal antibody 5.5 reacts with p8,14, a myeloid molecule associated with some vascular endothelium. Eur. J. Immunol. 19: 1053-1061.
5. Zimmer, D.B., et al. 1991. Isolation of a rat S-100 α cDNA and distribution of its mRNA in rat tissues. Brain Res. Bull. 27: 157-162.
6. Wang, Y.Z. and Christakos, S. 1995. Retinoic acid regulates the expression of the calcium-binding protein, Calbindin D28K. Mol. Endocrinol. 9: 1510-1521.
7. Muntener, M., et al. 1995. Increase of skeletal muscle relaxation speed by direct injection of parvalbumin cDNA. Proc. Natl. Acad. Sci. USA 92: 6504-6508.
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9. Hessian, P.A., et al. 2001. The heterodimeric complex of MRP-8 (S100A8) and MRP-14 (S100A9). Antibody recognition, epitope definition and the implications for structure. Eur. J. Biochem. 268: 353-363.

STORAGE

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

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: S100A12 (human) mapping to 1q21.3.

SOURCE

Calgranulin C (19F5) is a mouse monoclonal antibody raised against recombinant Calgranulin C of human origin.

PRODUCT

Each vial contains 50 µg IgG_1 in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Calgranulin C (19F5) is recommended for detection of Calgranulin C of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:5000), immunofluorescence (starting dilution to be determined by researcher, dilution range 1:50-1:2500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:50-1:2500).

Suitable for use as control antibody for Calgranulin C siRNA (h): sc-43346, Calgranulin C shRNA Plasmid (h): sc-43346-SH and Calgranulin C shRNA (h) Lentiviral Particles: sc-43346-V.

Molecular Weight of Calgranulin C: 11 kDa.

Positive Controls: HL-60 + DMSO cell lysate: sc-24703.

SELECT PRODUCT CITATIONS

1. Nathe, K.E., et al. 2012. Innate immune activation in neonatal tracheal aspirates suggests endotoxin-driven inflammation. Pediatr. Res. 72: 203-211.
2. Wen, X., et al. 2018. Effects of S100A12 gene silencing on serum levels of anti-inflammatory/pro-inflammatory cytokines in septic rats through the ERK signaling pathway. J. Cell. Biochem. 119: 4038-4049.
3. Duan, L., et al. 2018. HBx-induced S100A9 in NFκB dependent manner promotes growth and metastasis of hepatocellular carcinoma cells. Cell Death Dis. 9: 629.
4. Mints, M., et al. 2021. Tumour inflammation signature and expression of S100A12 and HLA class I improve survival in HPV-negative hypopharyngeal cancer. Sci. Rep. 11: 1782.
5. Li, C., et al. 2021. Comprehensive profiling reveals distinct microenvironment and metabolism characterization of lung adenocarcinoma. Front. Genet. 12: 619821.

RESEARCH USE

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