

Calgranulin C (19F5): sc-101347

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 , 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 parvalbumins 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

1. Pfyffer, G.E., et al. 1987. Developmental and functional studies of parvalbumin and Calbindin D28K in hypothalamic neurons grown in serum-free medium. *J. Neurochem.* 49: 442-451.
2. Kagi, U., et al. 1988. Developmental appearance of the Ca²⁺-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.* 5: 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.
8. Rickmann, M., et al. 1995. S100 protein expression in subpopulations of neurons of rat brain. *Neuroscience* 67: 977-991.
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.

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 μ g IgG₁ 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 NF κ B dependent manner promotes growth and metastasis of hepatocellular carcinoma cells. *Cell Death Dis.* 9: 629.

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.

PROTOCOLS

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