

Calgranulin B (F-4): sc-373704

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.

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.
3. 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.
4. Kagi, U., et al. 1988. Developmental appearance of the Ca²⁺-binding proteins parvalbumin, Calbindin D-28K, S-100 proteins and calmodulin during testicular development in the rat. *Cell Tissue Res.* 252: 359-365.
5. Wilkinson, M.M., et al. 1988. Expression pattern of two related cystic fibrosis-associated calcium-binding proteins in normal and abnormal tissues. *J. Cell Sci.* 91: 221-230.
6. Zimmer, D.B., et al. 1991. Isolation of a rat S100 α cDNA and distribution of its mRNA in rat tissues. *Brain Res. Bull.* 27: 157-162.

CHROMOSOMAL LOCATION

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

SOURCE

Calgranulin B (F-4) is a mouse monoclonal antibody raised against amino acids 25-114 of Calgranulin B 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.

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 (F-4) 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 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.

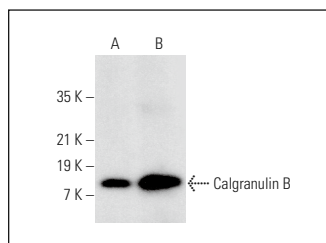
Molecular Weight of Calgranulin B: 14 kDa.

Positive Controls: human tonsil tissue extract: sc-364263, human spleen extract: sc-363779 or HL-60 whole cell lysate: sc-2209.

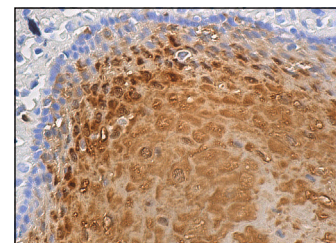
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Calgranulin B (F-4): sc-373704. Western blot analysis of Calgranulin B expression in human tonsil (A) and human spleen (B) tissue extracts.



Calgranulin B (F-4): sc-373704. Immunoperoxidase staining of formalin fixed, paraffin-embedded human esophagus tissue showing cytoplasmic and nuclear staining of squamous epithelial cells.

RESEARCH USE

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



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.