

S-100 α chain (SH-A1): sc-58840

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). The S-100 protein is involved in the regulation of cellular processes such as cell cycle progression and differentiation. Research also indicates that the S-100 protein may function in the activation of Ca^{2+} induced Ca^{2+} release, inhibition of microtubule assembly and inhibition of protein kinase C mediated phosphorylation. Two S-100 subunits, sharing 60% sequence identity, have been described as S-100 α chain and S-100 β chain. Three S-100 dimeric forms have been characterized, differing in their subunit composition of either two α chains, two β chains or one α and one β chain. S-100 localizes to the cytoplasm and nuclei of astrocytes, Schwann's cells, ependymomas and astroglomas. S-100 is also detected in almost all benign naevi, malignant melanocytic tumours and in Langerhans cells in the skin. 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.

REFERENCES

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4. Zimmer, D.B., Song, W. and Zimmer, W.E. 1991. Isolation of a rat S-100 α cDNA and distribution of its mRNA in rat tissues. *Brain Res. Bull.* 27: 157-162.
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CHROMOSOMAL LOCATION

Genetic locus: S100A1 (human) mapping to 1q21.3.

SOURCE

S-100 α chain (SH-A1) is a mouse monoclonal antibody raised against full length native S-100 α chain of bovine origin.

PRODUCT

Each vial contains 100 μ l ascites containing IgG₁ with < 0.1% sodium azide.

APPLICATIONS

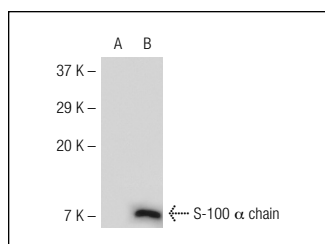
S-100 α chain (SH-A1) is recommended for detection of S-100 α chain of human and bovine origin by Western Blotting (starting dilution to be determined by researcher, dilution range), immunoprecipitation [1-2 μ l per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution to be determined by researcher, dilution range 1:100-1:2000); non cross-reactive with other members of the EF-hand family such as calmodulin, parvalbumin, intestinal calcium binding protein and myosin light chain.

Suitable for use as control antibody for S-100 α chain siRNA (h): sc-43354, S-100 α chain shRNA Plasmid (h): sc-43354-SH and S-100 α chain shRNA (h) Lentiviral Particles: sc-43354-V.

Molecular Weight of S-100 α chain: 11 kDa.

Positive Controls: S-100 α chain (m): 293T Lysate: sc-123335.

DATA



S-100 α chain (SH-A1): sc-58840. Western blot analysis of S-100 α chain expression in non-transfected: sc-117752 (A) and mouse S-100 α chain transfected: sc-123335 (B) 293T whole cell lysates.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

RESEARCH USE

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