

Product Information

Anti-S-100 (β-Subunit) antibody, Mouse monoclonal
clone SH-B1, purified from hybridoma cell culture

Catalog Number **SAB4200671**

Product Description

Anti-S-100 (β-subunit) (mouse IgG1 isotype) is derived from the SH-B1 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from an immunized mouse. Purified bovine brain S-100β preparation was used as the immunogen. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents (Sigma ISO-2). The antibody is purified from culture supernatant of hybridoma cells.

Anti-S-100 (β-subunit) recognizes an epitope located on the β-chain of S-100. The antibody may be used in various immunochemical techniques including Immunohistochemistry, ELISA¹ (Ca⁺⁺ ion independent), Immunocytochemistry¹, Immunoblotting² and dot blot. Cross-reactivity has been observed with S-100 from human, bovine, porcine, rabbit, cat, rat and chicken.³ The product does not react with other members of the EF-hand family such as S-100α, calmodulin, parvalbumin, intestinal calcium-binding protein and myosin light chain.

S-100 is a set of small, thermolabile, highly acidic homo or hetero-dimer calcium binding proteins, S-100α (alpha) and S-100β (beta) are brain specific. S-100β binds both calcium and zinc ions reversibly at physiologic pH.⁴ S-100 is involved in cell-growth regulation, increasing membrane permeability to cations, inflammatory response in many brain diseases, including schizophrenia stimulation of nucleolar RNA polymerase activity and transporting proteins and free fatty acids in adipocytes. S-100β is expressed in several neuronal cells such as Schwann cells, pituitary cells of the neurohypophysis, Langerhans' cells and interdigitating cells. S-100β tissue distribution can be a useful tool in the differential diagnosis of neoplasms and proliferative processes. Monoclonal Anti-S-100 (β-subunit) reacting specifically against the β-subunit is a useful tool in distinguishing malignant melanoma from undifferentiated carcinoma or lymphoma and in distinguishing gliomas and schwannomas together with their counterparts in the gastrointestinal tract.¹⁻⁶

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody Concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunohistochemistry: a working dilution of 1.5-3 μg/mL is recommended using immunoperoxidase labeling of pronase digested, formalin-fixed, paraffin-embedded sections of rabbit tongue.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working concentration by titration test.

References

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2. Fujiwara S., et al., *PLoS One.*, **9**, e115400 (2014).
3. Beyaz L., et al., *Turk. J. Vet. Anim. Sci.*, **33**, 121-129 (2009).
4. Baudier, J., et al., *J. Biol. Chem.*, **261**, 8192-203 (1986).
5. Mani, R., et al., *Biochemistry*, **21**, 2607-12 (1982).
6. Kan-Mitchell, J., et al., *Invest. Ophthalm. Vis. Sci.*, **31**, 1492-96 (1990).

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