

S100B

Reactivity: Mouse Rat

Tested applications: WB

Recommended Dilution: WB 1:500 - 1:2000

Calculated MW: 11kDa

Observed MW: Refer to Figures

Immunogen:

Recombinant protein of human S100B

Storage Buffer:

Store at -20. Avoid freeze / thaw cycles. Buffer: PBS with 0.02% sodium azide, 50% glycerol, pH7.3.

Concentration:

b

Synonym:

S100B;NEF;S100;S100beta ;

Catalog #: A0676

Antibody Type:

Polyclonal Antibody

Species: Rabbit

Gene ID: 6285

Isotype: IgG

Swiss Prot: P04271

Purity: Affinity purification

For research use only.

Background:

Despite their relatively small size (8-12 kDa) and uncomplicated architecture, S100 proteins regulate a variety of cellular processes such as cell growth and motility, cell cycle progression, transcription, and differentiation. To date, 25 members have been identified, including S100A1-S100A18, trichohyalin, filaggrin, repetin, S100P, and S100Z, making it the largest group in the EF-hand, calcium-binding protein family. Interestingly, 14 S100 genes are clustered on human chromosome 1q21, a region of genomic instability. Research studies have demonstrated that significant correlation exists between aberrant S100 protein expression and cancer progression. S100 proteins primarily mediate immune responses in various tissue types but are also involved in neuronal development (1-4). Each S100 monomer bears two EF-hand motifs and can bind up to two molecules of calcium (or other divalent cation in some instances). Structural evidence shows that S100 proteins form antiparallel homo- or heterodimers that coordinate binding partner proximity in a calcium-dependent (and sometimes calcium-independent) manner. Although structurally and functionally similar, individual members show restricted tissue distribution, are localized in specific cellular compartments, and display unique protein binding partners, which suggests that each plays a specific role in various signaling pathways. In addition to an intracellular role, some S100 proteins have been shown to act as receptors for extracellular ligands or are secreted and exhibit cytokine-like activities (1-4). S100B is abundantly expressed in astrocytes and is commonly used as an astrocytic marker in studies of the mammalian CNS. S100B is also expressed in immature and mature myelinating oligodendrocytes that are chondroitin sulfate proteoglycan (NG2)-positive (5).

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