

# Anti-S-100(Beta-subunit) Antibody (Monoclonal, SH-B1)

Catalog # ABO10472

## Product Information

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| <b>Application</b>       | IHC-P                                                                                                                                                                                     |
| <b>Primary Accession</b> | <a href="#">P04631</a>                                                                                                                                                                    |
| <b>Host</b>              | Mouse                                                                                                                                                                                     |
| <b>Isotype</b>           | Mouse IgG1                                                                                                                                                                                |
| <b>Reactivity</b>        | Human, Rat                                                                                                                                                                                |
| <b>Clonality</b>         | Monoclonal                                                                                                                                                                                |
| <b>Format</b>            | Lyophilized                                                                                                                                                                               |
| <b>Description</b>       | Mouse IgG monoclonal antibody for S-100 (beta-subunit), S100 calcium binding protein B (S100B) detection. Tested with IHC-P in Human;rabbit;rat. No cross reactivity with other proteins. |
| <b>Reconstitution</b>    | Add 1ml of PBS buffer will yield a concentration of 100ug/ml.                                                                                                                             |

## Additional Information

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|---------------------------------|------------------------------------------------------------------------------------------------------------------|
| <b>Gene ID</b>                  | 25742                                                                                                            |
| <b>Other Names</b>              | Protein S100-B, S-100 protein beta chain, S-100 protein subunit beta, S100 calcium-binding protein B, S100b      |
| <b>Calculated MW</b>            | 10744                                                                                                            |
| <b>Application Details</b>      | Immunohistochemistry(Paraffin-embedded Section), 1-2 µg/ml, Human, rabbit, rat, By Heat                          |
| <b>Subcellular Localization</b> | Cytoplasm . Nucleus .                                                                                            |
| <b>Tissue Specificity</b>       | Although predominant among the water-soluble brain proteins, S100 is also found in a variety of other tissues. . |
| <b>Source</b>                   | Eukaryota                                                                                                        |
| <b>Protein Name</b>             | Protein S100-B                                                                                                   |
| <b>Contents</b>                 | Mouse ascites fluid, 1.2% sodium acetate, 2mg BSA, with 0.01mg NaN3 as preservative.                             |
| <b>Clone Names</b>              | SH-B1                                                                                                            |
| <b>Immunogen</b>                | Bovine brain S-100b.                                                                                             |
| <b>Purification</b>             | Ascites                                                                                                          |

|                              |                                                                                                                                                                                       |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Cross Reactivity</b>      | No cross reactivity with other proteins                                                                                                                                               |
| <b>Storage</b>               | At -20 °C for one year. After r ° Constitution, at 4 °C for one month. It ° Can also be aliquotted and stored frozen at -20 °C for a longer time.Avoid repeated freezing and thawing. |
| <b>Sequence Similarities</b> | Belongs to the S-100 family.                                                                                                                                                          |

## Protein Information

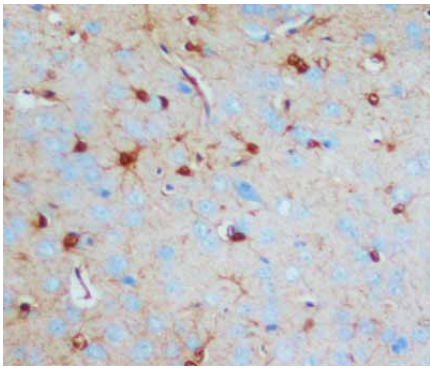
|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Name</b>              | S100b {ECO:0000303 PubMed:19910580, ECO:0000312 RGD:3615}                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Function</b>          | Small zinc- and- and calcium-binding protein that is highly expressed in astrocytes and constitutes one of the most abundant soluble proteins in brain (PubMed: <a href="#">14621986</a> , PubMed: <a href="#">15823027</a> , PubMed: <a href="#">18949447</a> , PubMed: <a href="#">20351179</a> ). Weakly binds calcium but binds zinc very tightly-distinct binding sites with different affinities exist for both ions on each monomer (PubMed: <a href="#">15823027</a> ). Physiological concentrations of potassium ion antagonize the binding of both divalent cations, especially affecting high-affinity calcium-binding sites (By similarity). Acts as a neurotrophic factor that promotes astrocytosis and axonal proliferation (By similarity). Involved in innervation of thermogenic adipose tissue by acting as an adipocyte-derived neurotrophic factor that promotes sympathetic innervation of adipose tissue (By similarity). Binds to and initiates the activation of STK38 by releasing autoinhibitory intramolecular interactions within the kinase (By similarity). Interaction with AGER after myocardial infarction may play a role in myocyte apoptosis by activating ERK1/2 and p53/TP53 signaling (PubMed: <a href="#">19910580</a> ). Could assist ATAD3A cytoplasmic processing, preventing aggregation and favoring mitochondrial localization (By similarity). May mediate calcium-dependent regulation on many physiological processes by interacting with other proteins, such as TPR-containing proteins, and modulating their activity (By similarity). |
| <b>Cellular Location</b> | Cytoplasm {ECO:0000250 UniProtKB:P04271}. Nucleus {ECO:0000250 UniProtKB:P04271}. Secreted {ECO:0000250 UniProtKB:P50114}. Note=Secretion into the medium is promoted by interaction with isoform CLSTN3beta of CLSTN3 {ECO:0000250 UniProtKB:P50114}                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Tissue Location</b>   | Although predominant among the water-soluble brain proteins, S100 is also found in a variety of other tissues                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

## Background

S100 protein is a 21,000-Da component first isolated from brain by Moore(1965). Immunocytochemical studies demonstrated that S100 protein is produced by a wide variety of normal and neoplastic cells of mesodermal, neuroectodermal, and epithelial origin(Herrera et al., 1988). The S100 molecule is a dimer; thus there are 3 forms of S100: alpha-alpha, known as S-100a(0); alpha-beta, known as S-100a; and beta-beta, known as S-100b. S100 genes are clustered on human chromosome 1q21. S-100 protein expression by primary and metastatic adenocarcinomas.

## Images

Anti-S-100(beta-subunit) antibody (monoclonal), ABO10472, IHC(P)IHC(P): Rat Brain Tissue Lysate



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