10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-S100 Beta Antibody

Catalog # ABO10629

Product Information

Application	WB
Primary Accession	P04271
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Protein S100-B(S100B) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	6285
Other Names	Protein S100-B, S-100 protein beta chain, S-100 protein subunit beta, S100 calcium-binding protein B, S100B
Calculated MW	10713
Application Details	Western blot, 0.1-0.5 □g/ml, Human, Rat, Mouse
Subcellular Localization	Cytoplasm . Nucleus .
Tissue Specificity	Although predominant among the water-soluble brain proteins, S100 is also found in a variety of other tissues.
Source	Eukaryota
Protein Name	Protein S100-B
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human S100 beta(64-78aa DGDGECDFQEFMAFV), identical to the related rat and mouse sequences.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	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.
Sequence Similarities	Belongs to the S-100 family.

Protein Information

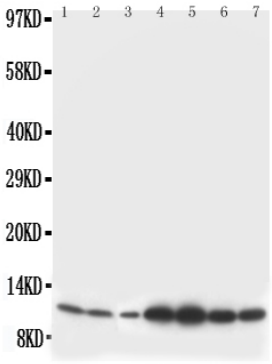
Name	S100B {ECO:0000303|PubMed:6487634, ECO:0000312|HGNC:HGNC:10500}
Function	Small zinc- and- and calcium-binding protein that is highly expressed in astrocytes and constitutes one of the most abundant soluble proteins in brain (PubMed:20950652, PubMed:6487634). Weakly binds calcium but binds zinc very tightly-distinct binding sites with different affinities exist for both ions on each monomer (PubMed:20950652, PubMed:6487634). 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 (By similarity). Could assist ATAD3A cytoplasmic processing, preventing aggregation and favoring mitochondrial localization (PubMed:20351179). May mediate calcium-dependent regulation on many physiological processes by interacting with other proteins, such as TPR-containing proteins, and modulating their activity (PubMed:22399290).
Cellular Location	Cytoplasm. Nucleus. Secreted {ECO:0000250|UniProtKB:P50114} Note=Secretion into the medium is promoted by interaction with isoform CLSTN3beta of CLSTN3. {ECO:0000250|UniProtKB:P50114}
Tissue Location	Although predominant among the water-soluble brain proteins, S100 is also found in a variety of other tissues

Background

S100 calcium binding protein B or S100B is a protein of the S-100 protein family. S100 genes include at least 13 members which are located as a cluster on chromosome 1q21; however, this gene is located at 21q22.3. S100B is a glial-derived protein that is a well-established biomarker for severity of neurological injury and prognosis for recovery. S100 beta is a calcium-binding protein that is expressed at high levels in brain primarily by astrocytes. Addition of the disulfide-bonded dimeric form of S100 beta to primary neuronal and glial cultures and established cell lines induces axonal extension and alterations in astrocyte proliferation and phenotype, but evidence that S100 beta exerts the same effects in vivo has not been presented. Reeves et al.(1994) demonstrated that the same effects of the S100B protein are exerted in vivo. They found that both astrocytosis and neurite proliferation occurred in transgenic mice expressing elevated levels of S100b. They suggested that these transgenic mice represent a useful model for studies of the role of S100B in glial-neuronal interactions in normal development and function of the brain and for analyzing the significance of elevated levels of the protein in Down syndrome and Alzheimer disease.

Images

Anti-S100 beta antibody, ABO10629, Western blottingLane 1: Rat Brain Tissue LysateLane 2: Rat Brain Tissue LysateLane 3: MCF-7 Cell LysateLane 4: HELA Cell



LysateLane 5: SMMC Cell LysateLane 6: JURKAT Cell LysateLane 7: COLO320 Cell Lysate

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.