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## Product Data Sheet

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Product Name: S100b Rhesus Macaque

Cat. No.: GP24481

Batch No.: 1

**Product Data**

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped at Room temp.
Synonyms	Protein S100-B; S100 calcium-binding protein B; S-100 protein subunit beta; S-100 protein beta chain; S100B; NEF; S100; S100beta.		
Amino Acid Sequence	SELEKAMVAL IDVFHQYSGR EGDKHKLKKS ELKELINNEL SHFLEEIKEQ EVVDKVMETL DSDGDGECDF QEFMAFVAMV TTACHEFFEHE		
Solubility	It is recommended to reconstitute the lyophilized S100B in sterile 18MΩ-cm H <sub>2</sub> O not less than 100μg/ml, which can then be further diluted to other aqueous solutions.		
Formulation	Lyophilized from a 0.2um filtered concentrated solution in PBS, pH 7.4.		

**Introduction**

S100b is a member of the S100 family of proteins which are a family of EF-hand calcium binding proteins that exist mostly as dimers of the 20 currently identified individual S100 monomers. The S100B homodimer is expressed in cells of the central nervous system, glial cells and in certain peripheral cells e.g. Schwann cells, melanocytes, adipocytes and chondrocytes. S100 proteins are localized either in the cytoplasm or the nucleus of a wide range of cells. S100 proteins are involved in the regulation of a number of cellular processes such as cell cycle progression and differentiation. There are at least 13 members in the S100 gene family, which are located as a cluster on chromosome 1q21; however, S100b is located at 21q22.3. The determination of S100B in serum levels may be used to monitor the extent of brain injury and malignant melanoma. S100b proteins may have a role in Neurite extension, proliferation of melanoma cells, stimulation of Ca<sup>2+</sup> fluxes, inhibition of PKC-mediated phosphorylation, astrocytosis and axonal proliferation, and inhibition of microtubule assembly. Chromosomal rearrangements and altered expression of the S100b gene are implicated in several neurological, neoplastic, and other types of diseases, including Alzheimer's disease, Down's syndrome, epilepsy,

**Caution: Product has not been fully validated for medical applications. For research use only.**

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amyotrophic lateral sclerosis, melanoma, and type I diabetes.

### Stability

Lyophilized S100B Rhesus Macaque although stable at room temperature for 3 weeks, should be stored desiccated below  $-18^{\circ}\text{C}$ . Upon reconstitution S100B Rhesus Macaque should be stored at  $4^{\circ}\text{C}$  between 2-7 days and for future use below  $-18^{\circ}\text{C}$ . Please prevent freeze-thaw cycles.

### Background

S100B Rhesus Macaque Recombinant produced in E.Coli is a single, non-glycosylated, polypeptide chain containing 91 amino acids and having a molecular mass of 10.7kDa. The S100B Rhesus Macaque is purified by proprietary chromatographic techniques.

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