

# PRODUCT INFORMATION



## S100B (mouse, recombinant)

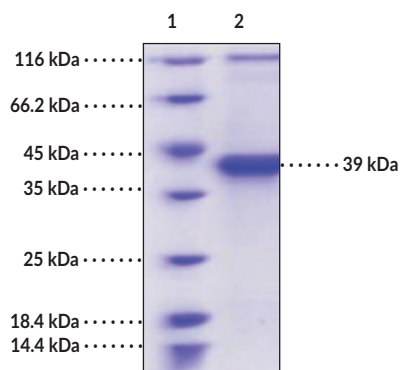
Item No. 38073

### Overview and Properties

**Synonyms:** S100 $\beta$ , S100 Calcium-binding Protein B, S100 Protein  $\beta$  Chain, S100 Protein Subunit  $\beta$   
**Source:** Recombinant N-terminal human IgG1 Fc-tagged mouse S100B expressed in HEK293 cells  
**Amino Acids:** 2-92  
**Uniprot No.:** P50114  
**Molecular Weight:** 39 kDa  
**Storage:** -80°C (as supplied)  
**Stability:**  $\geq 1$  year  
**Purity:**  $\geq 80\%$  estimated by SDS-PAGE  
**Supplied in:** Lyophilized from sterile PBS, pH 7.4  
**Endotoxin Testing:**  $< 1.0$  EU/ $\mu$ g, determined by the LAL endotoxin assay  
**Bioactivity:** See figures for details

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Image



Lane 1: MW Markers  
Lane 2: S100B

SDS-PAGE Analysis of S100B. This protein has a calculated molecular weight of 39 kDa.

WARNING  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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## Description

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S100 calcium-binding protein B (S100B) is a homodimeric protein, with each subunit containing two EF-hand calcium-binding domains.<sup>1</sup> S100B is expressed primarily in astrocytes but also by neural progenitor cells, dendritic cells, some lymphocyte subpopulations, and maturing oligodendrocytes. S100B has intracellular roles in calcium homeostasis, cell proliferation, energy metabolism, cytoskeletal regulation, and motility. It is also released extracellularly in response to various forms of brain injury and acts as a damage-associated molecular pattern (DAMP) through its interaction with receptor for advanced glycation end products (RAGE).<sup>1-4</sup> Peripheral blood levels of S100B are increased in patients with autism spectrum disorder, acute ischemic stroke, or neonatal brain injury.<sup>2-4</sup> Cayman's S100B (mouse, recombinant) protein is a disulfide-linked homodimer. The reduced monomer, composed of S100B (amino acids 2-92) fused to human IgG1 Fc at its N-terminus, consists of 351 amino acids, and has a calculated molecular weight of 39 kDa.

## References

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1. Angelopoulou, E., Paudel, Y.N., and Piperi, C. Emerging role of S100B protein implication in Parkinson's disease pathogenesis. *Cell. Mol. Life Sci.* **78(4)**, 1445-1453 (2021).
2. Onatsu, J., Vanninen, R., Jäkälä, P., *et al.* Tau, S100B and NSE as blood biomarkers in acute cerebrovascular events. *In Vivo* **34(5)**, 2577-2586 (2020).
3. Zheng, Z., Zheng, P., and Zou, X. Peripheral blood S100B levels in autism spectrum disorder: A systematic review and meta-analysis. *J. Autism Dev. Disord.* **51(8)**, 2569-2577(2021).
4. Metallinou, D., Karampas, G., Nyktari, G., *et al.* S100B as a biomarker of brain injury in premature neonates. A prospective case - control longitudinal study. *Clin. Chim. Acta* **510**, 781-786 (2020).

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