

# Human S100B Protein (Fc Tag)

Catalog Number: 10181-H01H



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

NEF; S100; S100-B; S100beta

### Protein Construction:

A DNA sequence encoding the human S100B (NP\_006263.1) (Ser 2-Glu 92) was expressed with the fused Fc region of human IgG1 at the N-terminus.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

**Purity:** > 95 % as determined by SDS-PAGE

### Bio Activity:

**1. Measured by its ability to bind mouse S100A1 in a functional ELISA. 2. Measured by its ability to bind TP53 in a functional ELISA. 3. Immobilized recombinant human Fc-S100B (Cat:10181-H01H) at 10 µg/mL (100 µl/well) can bind biotinylated human S100A1 (Cat:10179-HNAE) with a linear range of 15.6-250 ng/mL.**

### Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Glu 20

### Molecular Mass:

The recombinant human Fc/S100B is a disulfide-linked homodimeric protein. The reduced monomer consists of 328 amino acids and has a predicted molecular mass of 37.2 kDa. As a result of glycosylation, the apparent molecular mass of rhFc/S100B monomer is approximately 40 kDa in SDS-PAGE under reducing conditions.

### Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

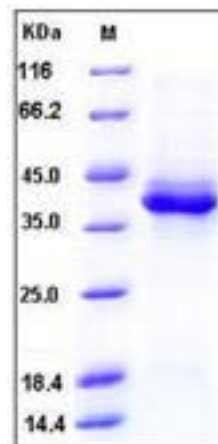
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

S100B is a member of the S100 family of proteins containing two EF-hand-type calcium-binding motifs. S100B exerts both intracellular and extracellular functions. Intracellular S100B acts as a stimulator of cell proliferation and migration and an inhibitor of apoptosis and differentiation, which might have important implications during brain, cartilage and skeletal muscle development and repair, activation of astrocytes in the course of brain damage and neurodegenerative processes, and of cardiomyocyte remodeling after infarction, as well as in melanomagenesis and gliomagenesis. As an extracellular factor, S100B engages RAGE (receptor for advanced glycation end products) in a variety of cell types with different outcomes (i.e. beneficial or detrimental, pro-proliferative or pro-differentiative) depending on the concentration attained by the protein, the cell type and the microenvironment. This calcium binding astrocyte-specific cytokine, presents a marker of astrocytic activation and reflects CNS injury. The excellent sensitivity of S100B has enabled it to confirm the existence of subtle brain injury in patients with mild head trauma, strokes, and after successful resuscitation from cardiopulmonary arrest. Recent findings provide evidence, that S100B may decrease neuronal injury and/or contribute to repair following traumatic brain injury (TBI). Hence, S100B, far from being a negative determinant of outcome, as suggested previously in the human TBI and ischemia literature, is of potential therapeutic value that could improve outcome in patients who sustain various forms of acute brain damage.

## References

1. Kleindienst A, *et al.* (2006) A critical analysis of the role of the neurotrophic protein S100B in acute brain injury. *J Neurotrauma*. 23(8): 1185-200.
2. Bloomfield SM, *et al.* (2007) Reliability of S100B in predicting severity of central nervous system injury. *Neurocrit Care*. 6(2): 121-38.
3. Donato R, *et al.* (2009) S100B's double life: intracellular regulator and extracellular signal. *Biochim Biophys Acta*. 1793(6): 1008-22.

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