Antibodies

Anti-Human S100B Antibody, Polyclonal

Rabbit polyclonal antibody against human S100B, unconjugated

Catalog #100-1344

200 µL

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Product Description

This rabbit polyclonal antibody reacts with human S100B, a protein involved in a wide array of intracellular and extracellular regulatory functions. S100B belongs to a family of small Ca^{2+}-binding proteins of the EF-hand type, consisting of over 20 members expressed only in vertebrates. Expressed in a cell-specific manner, S100B exists as a homodimer and sometimes as a S100B-S100A1 heterodimer within cells. Like other S100 members, as a Ca^{2+} sensor protein, it is activated by Ca^{2+} which results in a conformational change in the C-terminal, exposing a hydrophobic patch by which the protein interacts with a variety of targets. Extracellularly, it exerts its effects by being secreted by certain cell types as well as being passively released by other cell types in the advent of tissue injury. For this reason, S100B can also function as a damage-associated molecular pattern (DAMP), and it can pose as a biomarker for blood-brain barrier disruption as well as an indication of brain injury.

Target Antigen Name:	S100B
Alternative Names:	NEF, S100, S100-B, S100beta
Gene ID:	6285
Species Reactivity:	Human
Host Species:	Rabbit
Clonality:	Polyclonal
Clone:	Not applicable
Isotype:	Not applicable
Immunogen:	Recombinant human S100B protein
Conjugate:	Unconjugated

Applications

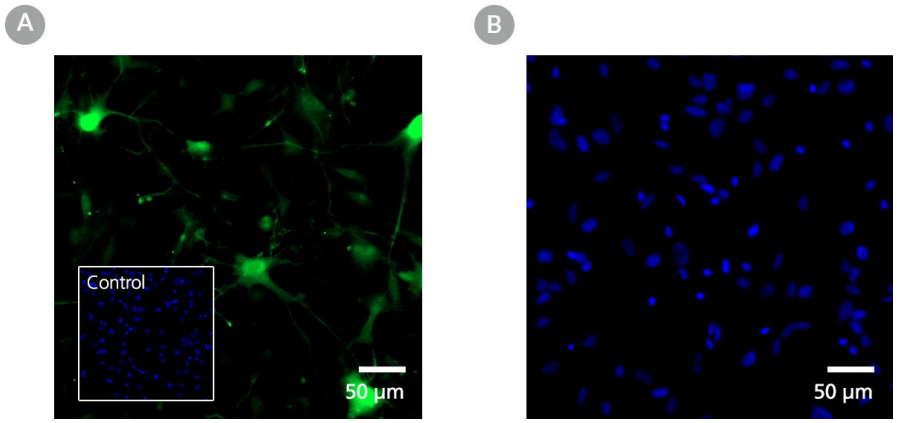
Verified:	ICC/IF
Special Applications:	This antibody clone has been verified for labeling S100B-positive human pluripotent stem cell (hPSC)-derived astrocytes generated with STEMdiff™ Astrocyte Differentiation Kit (Catalog #100-0013) and STEMdiff™ Astrocyte Maturation Kit (Catalog #100-0016).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence-activated cell sorting; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IHC-P: Immunohistochemistry (paraffin-embedded); IP: Immunoprecipitation; RIA: Radioimmunoassay; WB: Western blotting

Properties

Formulation:	Phosphate-buffered saline, pH 7.0, containing 0.03% ProClin™ 300
Purification:	The antibody was purified by affinity chromatography.
Stability and Storage:	Product stable at -20°C when stored undiluted. Avoid repeated freeze-thaw cycles. Stable until expiry date (EXP) on label.
Directions for Use:	The suggested use of this antibody is: ICC/IF, 2 - 5 µg/mL. It is recommended that the antibody be titrated for optimal performance for each application. For antibody concentration, refer to the lot-specific Certificate of Analysis at www.stemcell.com/coa.

Data



(A) Cortical-type astrocytes were generated from hPSC-derived neural progenitor cells using STEMdiff™ Astrocyte Differentiation Kit for 3 weeks and subsequently matured for the following 3 weeks using STEMdiff™ Astrocyte Maturation Kit, then fixed and labeled with Anti-Human S100B Antibody, followed by Goat Anti-Rabbit IgG (H+L) Antibody, Polyclonal, iFluor™ 488 (green) (Catalog #100-1082). Mature astrocytes are S100B-positive. Inset shows astrocytes labeled with a rabbit IgG isotype control antibody, followed by Goat Anti-Rabbit IgG (H+L) Antibody, Polyclonal, iFluor™ 488 (with DAPI staining).
(B) DAPI (blue) counterstaining of the cells shown in figure (A).

Related Products

For a complete list of antibodies, including other conjugates, sizes, and clones, as well as related products available from STEMCELL Technologies, visit www.stemcell.com/antibodies, or contact us at techsupport@stemcell.com.

References

1. Sorci G et al. (2013) S100B protein in tissue development, repair and regeneration. World Journal of Biological Chemistry 4(1): 1.

2. Pham N et al. (2010) Extracranial sources of S100B do not affect serum levels. PLOS One 5(9): e12691.

3. Zhang J et al. Expression of S100B during the innate immune of corneal epithelium against fungi invasion. (2016) International Journal of Ophthalmology 9(2): 191.

4. Aceti A et al. (2020) Serum S100B protein as a marker of severity in Covid-19 patients. Scientific Reports 10(1): 1–8.