

Datasheet for ABIN129527 **anti-S100A1 antibody**

2 Images



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Overview

Quantity:	500 µg
Target:	S100A1
Reactivity:	Human, Mouse, Rat, Cow
Host:	Rabbit
Clonality:	Polyclonal
Application:	Western Blotting (WB), ELISA, Immunohistochemistry (IHC)

Product Details

Purpose:	S100 Protein Antibody
Immunogen:	Immunogen: This Protein A purified antibody was prepared from whole rabbit serum produced by repeated immunizations with full-length bovine S100 protein (mixture of aa homodimers and ab heterodimers). Immunogen Type: Native Protein
Isotype:	IgG
Cross-Reactivity (Details):	This Protein A purified antibody is directed against bovine S100 protein.
Characteristics:	Synonyms: rabbit anti-S100 Protein Antibody, S100 calcium-binding protein A1, S-100 protein subunit alpha, S-100 protein alpha chain
Purification:	The product was purified from monospecific antiserum by Protein A chromatography.

Target Details

Target:	S100A1
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Target Details

Alternative Name: S100A1 ([S100A1 Products](#))

Background: Background: S-100 protein derived from brain tissue is an acidic calcium-binding protein with molecular weight of about 21 kDa. In human brain tissue S-100 protein is mainly presented as two isoforms - bb homodimer (S-100b) and ab heterodimer (S-100a). Because of its predominant location in astroglial cells S-100 protein can be used as a sensitive and reliable marker for central nervous system injury. Structural damage of glial cells causes leakage of S-100 protein into the extracellular matrix and into cerebrospinal fluid, further releasing into the bloodstream. Measurements of S-100 protein in patient serum samples are useful in monitoring of traumatic brain injury, ischemic brain damage after circulatory arrests, and in diagnosis and prognosis of clinical outcome in acute stroke. Although predominant among the water-soluble brain proteins, S-100 is also found in a variety of other tissues. S-100 is an intracellular protein that weakly binds calcium. It binds zinc very tightly, however, and this appears to increase the affinity of the protein for calcium. Distinct binding sites, with different affinities, exist for both ions on each monomer. Physiological concentrations of potassium ion antagonize the binding of both divalent cations, especially affecting high-affinity calcium-binding sites.

Gene ID: 528735

NCBI Accession: [NP_001092512](#)

UniProt: [P02639](#)

Pathways: [Regulation of Muscle Cell Differentiation](#), [Toll-Like Receptors Cascades](#), [S100 Proteins](#)

Application Details

Application Notes: Immunohistochemistry Dilution: 1:200 - 1:2,000
Application Note: This Protein A purified antibody has been tested for use in immunohistochemistry, and western blot and is suitable for ELISA. Specific conditions for reactivity should be optimized by the end user. Expect a band ~ 11 kDa in size corresponding to S100 monomer by western blotting in the appropriate cell lysate or extract.
Western Blot Dilution: 1:500 - 1:3,000
ELISA Dilution: 1:5,000 - 1:25,000
Other: User Optimized

Restrictions: For Research Use only

Handling

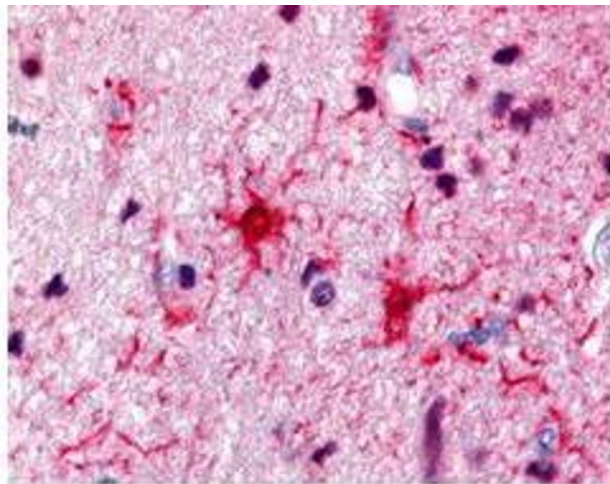
Format:	Lyophilized
Reconstitution:	Reconstitution Volume: 100 µL Reconstitution Buffer: Restore with deionized water (or equivalent)
Concentration:	5.0 mg/mL
Buffer:	Buffer: 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 Stabilizer: None Preservative: 0.01 % (w/v) Sodium Azide
Preservative:	Sodium azide
Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	4 °C, -20 °C
Storage Comment:	Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiry Date:	12 months

Images



Western Blotting

Image 1. Western blot using Affinity Purified anti-S-100 antibody shows detection of a band ~11 kDa corresponding to bovine S-100 monomer (100 ng loaded, arrowhead lane 1). The antibody also detects S-100 from rat brain lysate (lane 2). Approximately 35 µg of a rat brain whole cell lysate was separated by 16% SDS-PAGE and transferred onto nitrocellulose. After blocking, the membrane was probed with the primary antibody diluted to 1:1,000 for 2h at room temperature followed by washes and reaction with a 1:10,000 dilution of 800 conjugated Gt-a-Rabbit IgG [H&L] MX for 45 min at room temperature. 800 fluorescence image was captured using the Infrared Imaging System developed



by LI-COR. IRDye is a trademark of LI-COR, Inc. Other detection systems will yield similar results.

Immunohistochemistry

Image 2. Rabbit anti-S100 was used at a 1:500 dilution to detect S100 by immunohistochemistry in human brain astrocyte tumor tissue. Tissue was formalin-fixed and paraffin embedded. Personal Communication, Alan Yen, LifeSpanBiosciences, Seattle, WA.