

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse S100A13 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 40% cross-reactivity with recombinant human (rh) S100A13 is observed, and less than 1% cross-reactivity with rhS100A1 and rhS10
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant mouse S100A13 Ala2-Lys98 Accession # P97352
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

S100A13 is an 11 kDa member of the S100 (soluble in 100% saturated ammonium sulfate) family of vertebrate EF-hand Ca^{++} -binding proteins (1-3). It is widely expressed as a homodimer with 98 amino acid (aa) long subunits (2, 3). Mouse S100A13 shares 87%, 83%, 91%, 86%, 81%, and 53% aa identity with rat, human, bovine, canine, opossum, and chicken S100A13, respectively. Like other S100 proteins, S100A13 is small and generally acidic, but it contains a basic residue-rich sequence at the C-terminus, and two EF hand motifs that bind Ca^{++} with differing affinities (2-4). Some S100 proteins, including S100A13, are able to bind the cell surface receptor for advanced glycation end-products (RAGE) (5). Despite lacking a signal sequence, S100A13 plays an important role in Cu^{++} -dependent export of FGF-1 (FGF acidic) and IL-1 α from the cell in response to stresses such as heat shock, anoxia, and starvation (6-8). Binding of copper is necessary for formation of a multi-protein complex between S100A13, FGF-1 and p40 synaptotagmin-1 (syt-1) (9, 10). Cu^{++} ions supplied by S100A13 are thought to oxidize and downregulate the activity of FGF-1 prior to export (10). Calcium influx may also play a similar role in FGF-1 release from neuronal cells (11). S100A13 is composed of four amphiphilic helices that may interact with acidic phospholipid headgroups. With FGF-1 and syt-1, S100A13 likely perturbs the membrane, which allows the S100A13 protein complex to exit the cell (4, 12). S100A13 has been proposed as a marker for angiogenesis in tumors and endometrium, due to its role in stress-induced export of FGF-1 (13, 14). Based on in house studies, S100A13 has also been found to promote neurite outgrowth from rat cortical embryonic neurons (15).

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