Human S100A13 Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF4327

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human S100A13 in direct ELISAs and Western blots. In direct ELISAs, approximately 10% cross-reactivity with recombinant mouse S100A13 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human S100A13 Ala2-Lys98 Accession # Q99584
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

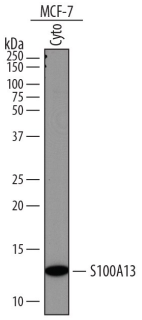
APPLICATIONS

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.*

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below

DATA

Western Blot



Detection of Human S100A13 by Western Blot. Western blot shows lysates of MCF-7 human breast cancer cell line. Gels were loaded with 25 µg of cytoplasmic (Cyto) extracts. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human S100A13 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF4327) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for S100A13 at approximately 12 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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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 two 98 amino acid (aa) long subunits (2, 3). Human S100A13 shares 83%, 90%, 91%, 87%, 78% and 47% aa identity with mouse, rat, cow, dog, opossum and chicken S100A13, respectively. Like other S100 proteins, S100A13 is small and generally acidic, but contains a basic residue-rich sequence at the C terminus, and two EF hand motifs that bind with Ca^{++} 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-1α 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).

References:

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