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Product datasheet for TA319193

S100A1 Rabbit Polyclonal Antibody

Product data:

Product Type:	Primary Antibodies
Applications:	IHC, WB
Recommended Dilution:	ELISA: 1:5,000 - 1:25,000, WB: 1:500 - 1:3,000, IHC: 1:200 - 1:2,000
Reactivity:	Bovine
Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
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).
Formulation:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Concentration:	lot specific
Conjugation:	Unconjugated
Storage:	Store at -20°C as received.
Stability:	Stable for 12 months from date of receipt.
Gene Name:	S100 calcium binding protein A1
Database Link:	NP_006262 Entrez Gene 6271 Human P23297
Synonyms:	S100; S100-alpha; S100A

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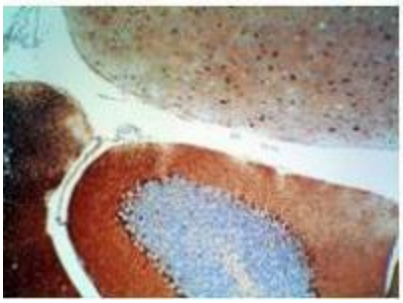
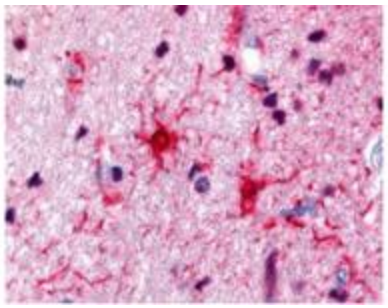
Note: S-100 protein derived from brain tissue is an acidic calcium-binding protein with molecular weight of about 21kDa. In human brain tissue S-100 protein is mainly presented as two isoforms - bb homodimer (S-100b) and ab heterodimer (S-100a). Because of its predominant location in astroglial cells 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.

Product images:

WB using 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). The primary antibody was diluted to 1:1,000 for 2h at RT, followed by washes and reaction with a 1:10,000 dilution of IRDye™800 conjugated Gt-a-Rabbit IgG [H&L] for 45 min at room temperature.



Rabbit anti-S-100 protein was used at 1:500 to detect S-100 by IHC using a 2-step indirect method. Dark nuclear staining is observed within basket cells located near the Purkinje cells in the cerebellum. Primary antibody was diluted as stated and reacted for 30' followed by washes and the addition of donkey anti-rabbit HRP diluted 1:500 for 30'. DAB+ (Dakocytomation) was used as a substrate and was allowed to react for 5'.



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.