



FabGennix Inc.
INTERNATIONAL

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Caclium binding protein S100 (S100)-selective antibodies

Human Caclium binding protein S100 α/β homodimer (S100 α/β) selective antibodies

Despite the abundance of calcium in the body, only a fraction of (1%) is present in the ionic form in biological fluids and rest is bound to various calcium binding proteins such as calmodulin, S100, calretinin, calbindin, parvalbumins etc. The ionic concentration of calcium is regulated by calcium sensing receptors. These receptors activate trans-cellular transport of calcium across the apical membranes facilitated by a group of low molecular weight calcium binding proteins. The active transport of calcium is achieved by Sodium calcium exchanges and by calcium transport proteins. S100 protein is a member of low MW calcium binding protein family, has two subunits (alfa and beta) and is expressed in S100 α/β or S100 β/β confirmations. Human S100b subunit is a 94 amino acid protein expressed in brain. There are 9 genes (S100A1 through S100A9) that are mapped on chromosome 21q22.2-q22.3. S100 proteins improve contractility of the heart muscle by various mechanisms involving handling of sarcoplasmic reticulum calcium by myofibrillar calcium ion responsiveness. Because of the predominant location of S100 proteins in the glial cells, the S100 protein is leaked in to extracellular matrix and in to the cerebrospinal fluid (CSF) upon CNS injury. The S100 protein is a reliable marker for measuring the extent of CNS and neuronal damage (1, 2). Measurement of S100 protein is also a useful tool in diagnosis of acute stroke (3) and in various brain haemorrhages due to ruptured aneurysm (4).

FabGennix Inc. provides two antibodies to rat and human S100 protein; (1) S100 beta/beta homodimer antibody raised in rabbits against purified human S100 protein. The S100-selective C-terminal peptide antibodies are also available from FabGennix International Inc. The S100 peptide antibodies label both alfa and beta form of the S100 proteins on Western blots using rat brain extracts. The S100 antibodies do not cross react with other calcium binding proteins including calbindin, calretinin or parvalbumins.

The S100-selective antibodies (S100b-100P/101AP and S100-110P/112AP) were generated using purified S100 protein or peptide methodology that results in higher titer and specificity. S100-selective antibodies are also available in affinity purified form for confocal, Western blotting and immunocytochemical analyses. FabGennix Inc. will also conjugate antibodies with enzymes, fluorescent probes upon request at extra charge.

Catalog #	Host species	Nature	Cross reactivity	Quantity	Price (US \$)
S100-110P	Rabbit	Polyclonal S100 alfa/beta N-terminal antiserum	R, H	100 ul	190
S100-112AP	Rabbit	N-terminus affinity Purified S100alfa/beta Abs	R, H	100 ug	225
S100-120P	Rabbit	Polyclonal S100alfa/beta C-terminal antiserum	R, H	100 ul	195
S100-121AP	Rabbit	C-terminal affinity purified S100 alfa/beta Abs	R, H	100 g	225
P-S100-112	N/A		N/A	250 ug	75
P-S100-121	N/A	Blocking protein for S100 Antibody	N/A	250 ug	75

R = rat; M = mouse; H = human; C = chicken; monk = monkey ; * not all variants are labeled equally

Immunogen: Purified human S100 beta/beta homodimer or peptides-KLH conjugates from near carboxy terminal end of S100 protein.

Applications: Antibody S100-101AP is ideal for WB, IMM and IHC applications n.d. The dilutions for this antibody for various applications is for reference only, investigators are expected to determine the optimal conditions for specific assay in his/her laboratory. WB > 1:500 IMM & i.p pull-down assays: n.d

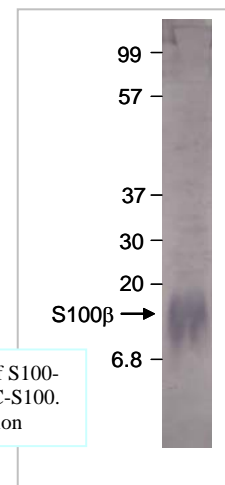
Reactivity: This antibody detects a 12 kDa S100 beta protein from rat brain.

Protocols: Standard protocol for various applications (WB, IMM and IHC) of this antibody is provided with the product specification sheet, however, FabGennix Inc. strongly recommends investigators to optimize conditions for use of this antibody in their laboratories.

Form/Storage: The antiserum is supplied in antibody stabilization buffer with 0.02% sodium azide. The affinity-purified antibodies are purified on antigen-spearose affinity column and supplied as 0.6-0.75 mg/ml IgG in antibody stabilization buffer containing preservatives. For long-term storage of antibodies, store at -20°C. FabGennix Inc. does not recommend storage of very dilute antibody solutions unless they are prepared in specially formulated multi use antibody dilution buffer (Cat # DiluOBuffer). Working solutions of antibodies in DiluOBuffer should be filtered through 0.45 μ filter after every use for long-term storage.

References:

1. Rothoerl R., et. Al., J. Trauma 1998; 45 (4) 765-767
2. Raabe A. et. Al., Acta Neurochir. 1998; 140(8), 787-791.
3. Abraha H. et. Al., Ann. Clin. Biochem. 1997; 34(Pt4) 366-374.



Western blot of S100-101AP with PC-S100. Antibody dilution

* For users who may require large amounts of S100-100P/S100-101AP/S100-112, please enquire about bulk material discounts.

This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.

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