



## ***Biotinylated Anti-human S100A1 Antibody***

### **ORDERING INFORMATION**

**Catalog Number:** BAF4476

**Lot Number:** CAEF01

**Size:** 50 µg

**Formulation:** 0.2 µm filtered solution in PBS with BSA

**Storage:** -20° C

**Reconstitution:** sterile 0.1% BSA in TBS

**Specificity:** human S100A1

**Immunogen:** *E. coli*-derived rhS100A1

**Ig Type:** sheep IgG

**Application:** Western blot

### ***Background***

S100A1 (also S100 alpha) is a 10 kDa member of the S100 family, EF-hand superfamily of Ca-binding proteins. It is expressed by striated muscle, endothelium and chondrocytes. Intracellularly, S100A1 regulates cytosolic Ca levels, and is part of the Hsp70/Hsp90 mutlichaperone complex that protects against protein denaturation. Extracellularly, it exists as both a homodimer and heterodimer with S100B, S100A4 and S100P, may bind to RAGE, and blocks apoptosis. Human S100A1 is 94 amino acids (aa) in length. It contains two EF-hand motifs (aa 13 - 48 and 50 - 85) and a Ca-dependent protein interaction site (aa 89 - 91). There may be one alternate start site 53 aa upstream of the standard start site. Full-length human S100A1 shares 93% and 98% aa identity with mouse and canine S100A1, respectively.

### ***Preparation***

Produced in sheep immunized with purified, *E. coli*-derived, recombinant human S100A1 (rhS100A1; aa 1 - 94; Accession # P23297). Human S100A1 specific IgG was purified by human S100A1 affinity chromatography and then biotinylated.

### ***Formulation***

Lyophilized from a 0.2 µm filtered solution in phosphate-buffered saline (PBS) containing 50 µg of bovine serum albumin (BSA) per 1 µg of antibody.

### ***Reconstitution***

Reconstitute with sterile Tris-buffered saline pH 7.3 (20 mM Trizma base, 150 mM NaCl) containing 0.1% BSA. If 1 mL of buffer is used, the antibody concentration will be 50 µg/mL.

### ***Storage***

Lyophilized samples are stable for twelve months from date of receipt when stored at -20° C to -70° C. Upon reconstitution, the antibody can be stored at 2° - 8° C for 1 month without detectable loss of activity. Reconstituted antibody can also be aliquotted and stored frozen at -20° C to -70° C **in a manual defrost freezer** for six months without detectable loss of activity. **Avoid repeated freeze-thaw cycles.**

### ***Specificity***

This antibody has been selected for use as a detection antibody in human S100A1 Western blots.

### ***Application***

**Western blot** - This antibody can be used at 0.1 - 0.2 µg/mL with the appropriate secondary reagents to detect human S100A1. The detection limit for rhS100A1 is approximately 5 ng/lane under non-reducing and reducing conditions. In this format, this antibody shows less than 5% cross-reactivity with rhS100B, rhS100P, and rhS100A2.

**Optimal dilutions should be determined by each laboratory for each application.**