

Overview

Synonyms	Protein S100-A1, S100 calcium-binding protein A1, S-100 protein alpha subunit, S-100 protein alpha chain, S100A1, S100A, S100, S100-alpha, S100-A1
Description	S100 calcium-binding protein A1 (S100A1) is a small calcium binding protein with EF-hand structures and belongs to the S100 family. S100 proteins include at least 25 members which are located as a cluster on human chromosome 1q21. S100A1 is found in the heart, skeletal muscle, brain, and kidney. S100A1 mainly resides on the sarcoplasmic reticulum, mitochondria and myofilaments. S100A1 may function in stimulation of Ca ²⁺ -induced Ca ²⁺ release, inhibition of microtubule assembly, and inhibition of protein kinase C-mediated phosphorylation. Reduced expression of this protein has been implicated in cardiomyopathies. Recombinant S100 calcium-binding protein A1 (S100A1) with His tag produced in <i>E. coli</i> is a single chain containing 101 amino acids with molecular mass of 11.5 kDa analyzed by reducing SDS-PAGE and is obtained by chromatographic techniques.
Accession No	NP_006262.1
Species	Human
Source	<i>E. coli</i>
Sequence	MHHHHHMGSG ELETAMETLI NVFHAHSGKE GDKYKLSKKE LKELLQTELS GFLDAQKDVD AVDKVMKELD ENGDGEVDFQ EYVVLVAALT VACNNFFWEN S

Properties

Measured Molecular Weight	11.5 kDa, observed by reducing SDS-PAGE.
Purity	> 95% as analyzed by SDS-PAGE and HPLC.
Formulation	Lyophilized after extensive dialysis against 20 mM Tris-HCl, 0.1 mM EDTA, pH7.0.
Reconstitution	Reconstituted in ddH ₂ O at 200 µg/ml.
Endotoxin Level	< 1 EU/µg, determined by LAL method.
Storage	Lyophilized recombinant S100 calcium-binding protein A1 (S100A1) remains stable up to 6 months at -80°C from date of receipt. Upon reconstitution, S100A1 should be stable up to 2 week at 4°C or up to 3 months at -20°C.
Note	For research use only

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