Recombinant Human S100A1 Protein(Trx Tag)

Catalog Number: PDEH100557

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

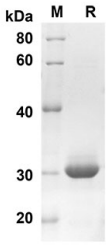
Description

Species	Human
Source	E.coli-derived Human S100A1 protein Met1-Ser94, with an N-terminal Trx
Calculated MW	30.3 kDa
Observed MW	30 kDa
Accession	P23297
Bio-activity	Not validated for activity

Properties

Purity	> 90% as determined by reducing SDS-PAGE.
Endotoxin	< 10 EU/mg of the protein as determined by the LAL method
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 ℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with 5% Trehalose and 5% Mannitol.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.5 mg/mL. Concentration is measured by UV-Vis.

Data



SDS-PAGE analysis of Human S100A1 proteins, 2 μg/lane of Recombinant Human S100A1 proteins was resolved with SDS-PAGE under reducing conditions, showing bands at 30.3 KD

Background

Small calcium binding protein that plays important roles in several biological processes such as Ca2+ homeostasis, chondrocyte biology and cardiomyocyte regulation (PubMed:12804600). In response to an increase in intracellular Ca2+ levels, binds calcium which triggers conformational changes (PubMed:23351007). These changes allow interactions with specific target proteins and modulate their activity (PubMed:22399290). Regulates a network in cardiomyocytes controlling sarcoplasmic reticulum Ca2+ cycling and mitochondrial function through interaction with the ryanodine receptors RYR1 and RYR2, sarcoplasmic reticulum Ca2+-ATPase/ATP2A2 and mitochondrial F1-ATPase (PubMed: 12804600). Facilitates diastolic Ca2+ dissociation and myofilament mechanics in order to improve relaxation during diastole.