S100A13 Protein, Human

Cat. No.:	HY-P71271
Synonyms:	Protein S100-A13; S100A13; S100 calcium-binding protein A13
Species:	Human
Source:	E. coli
Accession:	Q99584 (A2-K98)
Gene ID:	6284
Molecular Weight:	Approximately 12.0 kDa

PROPERTIES

AA Sequence	A A E P L T E L E E S I E T V V T T F F T F A R Q E G R K D S L S V N E F K E L V T Q Q L P H L L K D V G S L D E K M K S L D V N Q D S E L K F N E Y W R L I G E L A K E I R K K K D L K I R K K
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of 50 mM Tris-HCl, 1mM $CaCl_2$, 0.1% Tween-20, pH 8.0.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US;may vary elsewhere.

DESCRIPTION

Background	S100A13, a versatile protein, plays a pivotal role in the unconventional export of proteins devoid of a signal peptide. This function is orchestrated by its ability to bind two calcium ions per subunit and one copper ion, with the binding of copper not impeding calcium binding. Notably, S100A13 is indispensable for the copper-dependent stress-induced export of IL1A and FGF1. In a calcium-free state, the protein exhibits an affinity for lipid vesicles containing phosphatidylserine, distinguishing its membrane-interaction preferences. Structurally, S100A13 forms homodimers and is a constituent of a copper-dependent multiprotein complex alongside FGF1 and SYT1. These intricate interactions underscore the regulatory role of S100A13 in mediating the export of specific proteins through alternative pathways, contributing to cellular homeostasis. Additionally, the protein engages in direct interactions with IL1A, further expanding its repertoire of molecular partnerships.

Caution: Product has not been fully validated for medical applications. For research use only.

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