

S100A12 Protein, Human

Cat. No.:	HY-P71270
Synonyms:	Protein S100-A12; Calcium-binding protein in amniotic fluid 1; Calgranulin-C; Extracellular newly identified RAGE-binding protein; Migration inhibitory factor-related protein 6; S100 calcium-binding protein A12; Calcitermin; S100A12; CGRP; MRP-6; EN-RAGE
Species:	Human
Source:	E. coli
Accession:	P80511 (M1-E92)
Gene ID:	6283
Molecular Weight:	Approximately 11.0 kDa

PROPERTIES

AA Sequence	<p> M T K L E E H L E G I V N I F H Q Y S V R K G H F D T L S K G E L K Q L L T K E L A N T I K N I K D K A V I D E I F Q G L D A N Q D E Q V D F Q E F I S L V A I A L K A A H Y H T H K E </p>
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 µg/mL in ddH ₂ O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years from date of receipt. 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	<p>S100A12, a calcium-, zinc-, and copper-binding protein, plays a pivotal role in regulating inflammatory processes and immune responses. Its pro-inflammatory functions include the recruitment of leukocytes, promotion of cytokine and chemokine production, and modulation of leukocyte adhesion and migration. Functioning as an alarmin or danger-associated molecular pattern (DAMP) molecule, S100A12 activates innate immune cells by binding to the receptor for advanced glycation end products (AGER). This binding triggers signaling pathways such as MAP-kinase and NF-kappa-B, resulting in the production of pro-inflammatory cytokines and the up-regulation of cell adhesion molecules like ICAM1 and VCAM1. Acting as a chemoattractant, it draws monocytes and mast cells to inflammatory sites, inducing degranulation and activation of mast cells. S100A12 also exhibits inhibitory effects on matrix metalloproteinases (MMP2, MMP3, and MMP9) by chelating Zn(2+) from their active sites. Additionally, it demonstrates filariacidal and filariastatic activities, along with</p>
-------------------	---

antifungal properties against *C.albicans* and antibacterial effects against *E.coli* and *P.aeruginosa*. S100A12 forms homodimers and homooligomers (tetramers or hexamers) in the presence of calcium, zinc, and copper ions and interacts with AGER and CACYBP in a calcium-dependent manner.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite F, Monmouth Junction, NJ 08852, USA