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Product datasheet for TP726865

S100A12 Human Recombinant Protein

Product data:

Product Type:	Recombinant Proteins
Description:	Recombinant Human S100 Calcium Binding Protein A12/S100A12
Species:	Human
Expression cDNA Clone or AA Sequence:	Met1-Glu92
Buffer:	Lyophilized from a 0.2 um filtered solution of PBS, pH 7.4.
Note:	Recombinant Human S100 calcium-binding protein A12 is produced by our E.coli expression system and the target gene encoding Met1-Glu92 is expressed.
Storage:	Lyophilized protein should be stored at < -20°C, though stable at room temperature for 3 weeks. Reconstituted protein solution can be stored at 4-7°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Stability:	12 months from date of despatch
Locus ID:	6283
UniProt ID:	P80511
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

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Summary:

There are at least 21 different S100 proteins and the protein is 100% soluble in ammonium sulfate at neutral pH. S100 proteins play a role in regulation of protein phosphorylation, transcription factors, the dynamics of cytoskeleton constituents, enzyme activities, cell growth and differentiation, and the inflammatory response. S100A12 is characterized by two EF-hand calcium-binding motifs, zinc- and copper-binding protein.S100A12 is a disulfide-linked homodimer and the interface between the two subunits is composed mostly of hydrophobic residues.Its proinflammatory activity involves recruitment of leukocytes, promotion of cytokine and chemokine production, and regulation of leukocyte adhesion and migration. EN-RAGE acts as an alarmin or a danger associated molecular pattern (DAMP) molecule and stimulates innate immune cells via binding to receptor for advanced glycation endproducts (AGER). Binding to AGER activates the MAP-kinase and NF-kappa-B signaling pathways leading to production of proinflammatory cytokines and up-regulation of cell adhesion molecules ICAM1 and VCAM1. It also acts as a monocyte and mast cell chemoattractant. Moreover, it can stimulate mast cell degranulation and activation which generates chemokines, histamine and cytokines inducing further leukocyte recruitment to the sites of inflammation. It can inhibit the activity of matrix metalloproteinases; MMP2, MMP3 and MMP9 by chelating Zn2+ from their active sites.