

32-7602: Recombinant Human S100 Calcium Binding Protein A12/S100A12(Discontinued)

Gene : S100A12

Gene ID : 6283

Uniprot ID : P80511

Description

Source: E.coli.

MW :10.6kD.

Recombinant Human S100 calcium-binding protein A12 is produced by our E.coli expression system and the target gene encoding Met1-Glu92 is expressed. Human EN-RAGE belongs to the S100/calgranulin superfamily. 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. Human EN-RAGE 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.

Product Info

Amount : 10 µg / 50 µg

Content : Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.

Storage condition : 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.

Amino Acid : MTKLEEHLGIVNIFHQYSVRKGFDTLSKGELKQLLTKELANTIKNIKDKAVIDEIFQGLDANQDEQVDFQEFIS
LVAIALKAAHYHTHKE

Application Note

Always centrifuge tubes before opening. Do not mix by vortex or pipetting. It is not recommended to reconstitute to a concentration less than 100 µg/ml. Dissolve the lyophilized protein in ddH₂O. Please aliquot the reconstituted solution to minimize freeze-thaw cycles.

Endotoxin : Less than 0.1 ng/µg (1 IEU/µg) as determined by LAL test.