S100A12 Human E. coli

Product Data Sheet

Type: Recombinant
Source: E. coli
Species: Human
Other names: S100 calcium-binding protein A12, Calgranulin-C, CAGC, CGRP, Neutrophil S100 protein, Calcium-binding protein in amniotic fluid 1, CAAF1, p6, Extracellular newly identified, RAGE-binding protein, EN-RAGE

Cat. No.:

RD172221100 (0.1 mg)

Description

Total 101 AA. MW: 11.63 kDa (calculated). N-Terminal His-tag, 10 extra AA (highlighted).

Introduction to the Molecule

The S100A12 (EN-RAGE, calgranulin) is a member of the S100 protein family, which, in humans, consists of twenty five EF-hand (alpha helix-loop-alpha helix), calcium-binding proteins, mostly in the form of homodimer, heterodimer. The mature S100A12 contains 91 amino acids (Mr 10,444 Da). It is predominantly expressed and secreted by neutrophil granulocytes. It was found in monocytes in small quantities. Hofmann et al. (1999) reported that RAGE is a central cell surface receptor for S100A12 and that they are related members of the S100/calgranulin superfamily. Interaction of EN-RAGE (S100A12) with cellular RAGE on endothelium, mononuclear phagocytes, and lymphocytes triggeres cellular activation. In murine models, blockade of EN-RAGE/RAGE quenched delayed-type hypersensitivity and inflammatory colitis by arresting activation of central signaling pathways and expression of inflammatory gene mediators. In regard to its inflammatory properties, S100A12 was already described as promising marker for many diseases in human such as neurodegenerative diseases, atherosclerosis, cancerogenesis, osteoarthritis, familial mediterranean fever and idiopathic pulmonary fibrosis. The plasma S100A12 level is associated with cardiovascular disease in hemodialysis patients.

Research topic

Oncology, Others

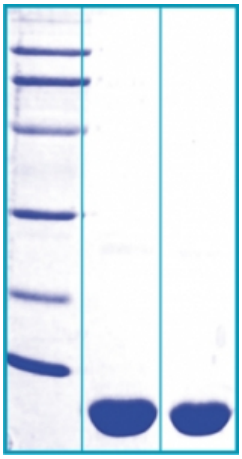
Amino Acid Sequence

MKHHHHHHAS TKLEEHLEGI VNIFHQYSVR KGHFDTLSKG ELKQLLTKEL ANTIKNIKDK AVIDEIFQGL DANQDEQVDF QEFISLVAIA LKAAHYHTHK E

Source

E. coli

SDS-PAGE gel



14% SDS-PAGE separation of Human S100A12 protein
1. M.W. marker - 14, 21, 31, 45, 66, 97 kDa
2. reduced and heated sample, 5µg / lane
3. non-reduced and non-heated sample, 5µg / lane

Formulation

Filtered (0,4 µm) and lyophilized in 0.5 mg/mL in 20mM TRIS, 50mM NaCl, pH 7.5

Reconstitution

Add deionized water to prepare a working stock solution of approximately 0.5 mg/mL and let the lyophilized pellet dissolve completely. Product is not sterile! Please filter the product by an appropriate sterile filter before using it in the cell culture.

Shipping

At ambient temperature. Upon receipt, store the product at the temperature recommended below.

Storage, Stability/Shelf Life

Store lyophilized protein at -20°C. Lyophilized protein remains stable until the expiry date when stored at -20°C. Aliquot reconstituted protein to avoid repeated freezing/thawing cycles and store at -80°C for long term storage. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after one week at 4°C.

Quality Control Test

BCA to determine quantity of the protein.
SDS PAGE to determine purity of the protein.

Applications

Western blotting

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