

Human AIMP1 / EMAP2 / SCYE1 Protein (His Tag)

Catalog Number: 10623-H07E



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

EMAP2; EMAPII; HLD3; p43; SCYE1

Protein Construction:

A DNA sequence encoding the native human SCYE1 (NP_004748.2) (Ala 2-Lys 312) was expressed, with a polyhistidine tag at the N-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Endotoxin:

Please contact us for more information.

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Met 1

Molecular Mass:

The recombinant human SCYE1 consisting of 318 amino acids and migrates as an 35 kDa band in SDS-PAGE under reducing conditions as predicted.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

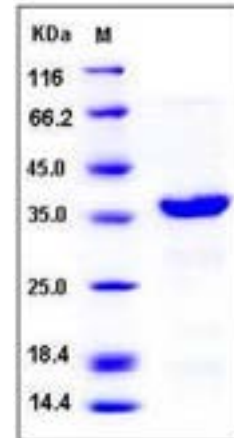
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Aminoacyl tRNA synthase complex-interacting multifunctional protein 1, also known as Multisynthase complex auxiliary component p43, Endothelial monocyte-activating polypeptide II, AIMP1, EMAP2 and SCYE1, is a nucleus protein which contains one tRNA-binding domain. AIMP1 (also known as p43) is a factor associated with a macromolecular aminoacyl-tRNA synthetase (ARS) complex but also plays diverse regulatory roles in various physiological processes. AIMP1 negatively regulates TGF-beta signaling via stabilization of Smurf2. It suggests the novel activity of AIMP1 as a component of negative feedback loop of TGF-beta signaling. Recently, it been demonstrated that AIMP1 is also secreted and acts as a novel pleiotropic cytokine. AIMP1 protein induces the maturation and activation of DCs, which skew the immune response toward a Th1 response. AIMP1 is known as a cytokine working in the control of angiogenesis, inflammation, and wound healing. AIMP1 is secreted from the pancreas upon glucose starvation, and it also plays a glucagon-like role in glucose homeostasis. Although AIMP1 was identified as a component of the macromolecular aminoacyl tRNA synthetase complex involved in the cellular translation process, it was also found to be secreted as a cytokine having complex physiological functions. Among these, AIMP1's angiostatic and immune stimulating activities suggest its potential use as a novel antitumor therapeutic protein. AIMP1 may exert its antitumor activity by inducing tumor-suppressing cytokines. Thus, AIMP1 may be useful as a novel anti-tumor agent.

References

- 1.Lee YS, *et al.* (2006) Antitumor activity of the novel human cytokine AIMP1 in an in vivo tumor model. *Mol Cells.* 21(2): 213-7.
- 2.Park SG, *et al.* (2006) Hormonal activity of AIMP1/p43 for glucose homeostasis. *Proc Natl Acad Sci U S A.* 103(40): 14913-8.
- 3.Kim E, *et al.* (2008) AIMP1/p43 protein induces the maturation of bone marrow-derived dendritic cells with T helper type 1-polarizing ability. *J Immunol.* 180(5): 2894-902.

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