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EMAP2 Rabbit pAb

Catalog # AP99682

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	Q12904
Other Accession	Q12904
Reactivity	Human
Predicted	Rat, Pig, Mouse, Rabbit, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	34353
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human EMAP2
Epitope Specificity	201-300/312
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Contains 1 tRNA-binding domain.
SUBUNIT	Homodimer. Component of the multisynthase complex which is comprised of a bifunctional glutamyl-prolyl-tRNA synthase, the monospecific isoleucyl, leucyl, glutaminyl, methionyl, lysyl, arginyl and aspartyl-tRNA synthases, and three auxiliary proteins, EEF1E1/p18, AIMP2/p38 and AIMP1/p43. Interacts (via N-terminus) with RARS (via N-terminus). Interacts (via C-terminus) with SMURF2. Interacts (via N-terminus) with HSP90B1/gp96 (via C-terminus). Interacts with PSMA7.
Post-translational modifications	Cleaved by caspase-7 in response to apoptosis to produce EMAP-II.
DISEASE	Defects in AIMP1 are the cause of leukodystrophy hypomyelinating type 3 (HLD3) [MIM:260600]. A severe autosomal recessive hypomyelinating leukodystrophy characterized by early infantile onset of global developmental delay, lack of development, lack of speech acquisition, and peripheral spasticity associated with decreased myelination in the central nervous system.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Non-catalytic component of the multisynthase complex. Stimulates the catalytic activity of cytoplasmic arginyl-tRNA synthase. Binds tRNA. Possesses inflammatory cytokine activity. Negatively regulates TGF-beta signaling through stabilization of SMURF2 by binding to SMURF2 and inhibiting its SMAD7-mediated degradation. Involved in glucose homeostasis through induction of glucagon secretion at low glucose levels. Promotes dermal fibroblast proliferation and wound repair. Regulates KDELR1-mediated retention of HSP90B1/gp96 in the endoplasmic reticulum. Plays a role in angiogenesis by inducing endothelial cell migration at low concentrations and endothelian cell apoptosis at high concentrations. Induces maturation of dendritic cells and monocyte cell adhesion. Modulates endothelial cell responses by degrading HIF-1A through interaction with PSMA7.

Additional Information

Gene ID	9255
Other Names	EMAP2; EMAPII; HLD3; SCYE1; p43; AIMP1_HUMAN; AIMP1; Multisynthase complex auxiliary component p43; aminoacyl tRNA synthetase complex interacting multifunctional protein 1; small inducible cytokine subfamily E, member 1 (endothelial monocyte-activating); EMAP II; ARS-interacting multifunctional protein 1; multisynthetase complex auxiliary component p43
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	AIMP1
Synonyms	EMAP2, SCYE1
Function	Non-catalytic component of the multisynthase complex. Stimulates the catalytic activity of cytoplasmic arginyl-tRNA synthase (PubMed:10358004). Binds tRNA. Possesses inflammatory cytokine activity (PubMed:11306575). Negatively regulates TGF-beta signaling through stabilization of SMURF2 by binding to SMURF2 and inhibiting its SMAD7- mediated degradation (By similarity). Involved in glucose homeostasis through induction of glucagon secretion at low glucose levels (By similarity). Promotes dermal fibroblast proliferation and wound repair (PubMed:16472771). Regulates KDELR1-mediated retention of HSP90B1/gp96 in the endoplasmic reticulum (By similarity). Plays a role in angiogenesis by inducing endothelial cell migration at low concentrations and endothelial cell apoptosis at high concentrations (PubMed:12237313). Induces maturation of dendritic cells and monocyte cell adhesion (PubMed:11818442). Modulates endothelial cell responses by degrading HIF-1A through interaction with PSMA7 (PubMed:19362550).
Cellular Location	Nucleus. Cytoplasm, cytosol. Secreted. Endoplasmic reticulum {ECO:0000250|UniProtKB:P31230}. Golgi apparatus {ECO:0000250|UniProtKB:P31230}. Note=Enriched in secretory vesicles of pancreatic alpha cells and secreted from the pancreas in response to low glucose levels (By similarity). Secreted in response to hypoxia (PubMed:10850427). Also secreted in response to both apoptotic and necrotic cell death. {ECO:0000250|UniProtKB:P31230, ECO:0000269|PubMed:10850427}

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.