

AIMP2 Antibody

Catalog # ASC11715

Specification

AIMP2 Antibody - Product Information

Application **WB, IHC, IF**
Primary Accession [Q13155](#)
Other Accession [NP_006294](#),
[11125770](#)
Reactivity **Human**
Host **Rabbit**
Clonality **Polyclonal**
Isotype **IgG**
Calculated MW **Predicted: 35 kDa**

Observed: 36 kDa
KDa
Application Notes **AIMP2 antibody can be used for detection of AIMP2 by Western blot at 1 - 2 µg/ml.**

AIMP2 Antibody - Additional Information

Gene ID **7965**
Target/Specificity
AIMP2; AIMP2 antibody is human specific.
AIMP2 antibody is predicted to not cross-react with AIMP1.

Reconstitution & Storage

AIMP2 antibody can be stored at 4°C for three months and -20°C, stable for up to one year.

Precautions

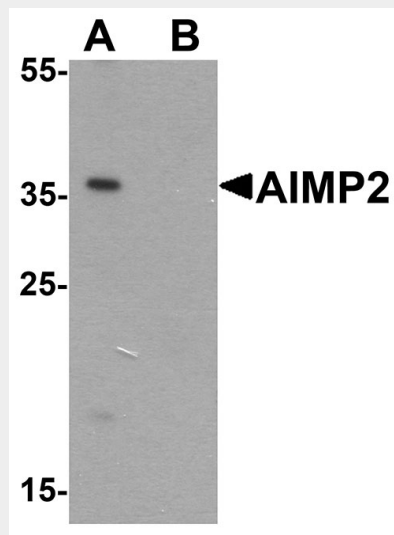
AIMP2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

AIMP2 Antibody - Protein Information

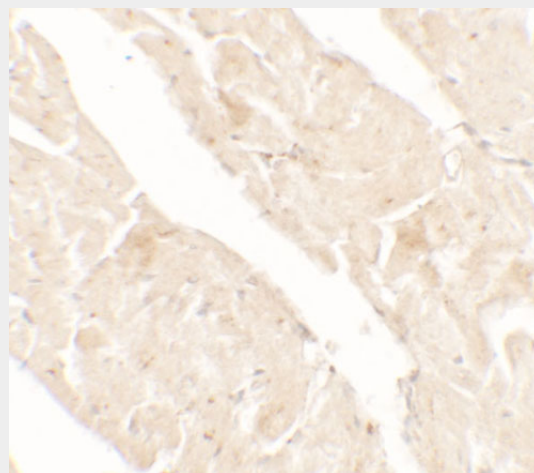
Name AIMP2

Synonyms JTV1

Function



Western blot analysis of AIMP2 in HeLa cell lysate with AIMP2 antibody at 1 µg/ml in (A) the absence and (B) the presence of blocking peptide.



Immunohistochemistry of AIMP2 in rat small intestine tissue with AIMP2 antibody at 5 µg/mL.

Required for assembly and stability of the aminoacyl-tRNA synthase complex (PubMed:19131329). Mediates ubiquitination and degradation of FUBP1, a transcriptional activator of MYC, leading to MYC down-regulation which is required for aveolar type II cell differentiation. Blocks MDM2-mediated ubiquitination and degradation of p53/TP53. Functions as a proapoptotic factor.

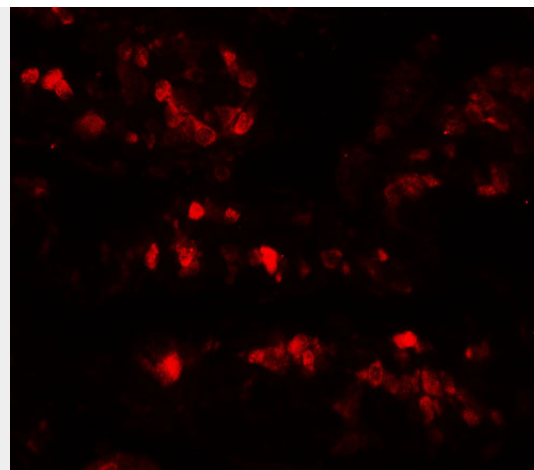
Cellular Location

Cytoplasm, cytosol. Nucleus {ECO:0000250|UniProtKB:Q8R010}. Note=Following DNA damage, dissociates from the aminoacyl-tRNA synthase complex and translocates from the cytoplasm to the nucleus. {ECO:0000250|UniProtKB:Q8R010}

AIMP2 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)



Immunofluorescence of AIMP2 in rat small intestine tissue with AIMP2 antibody at 20 µg/mL.

AIMP2 Antibody - Background

AIMP2 was initially identified as a part of an aminoacyl-tRNA synthetase complex (1). It was later discovered to be a cofactor and substrate of Parkin, a Ring-type E3 ubiquitin ligase that is important for the survival of dopamine neurons in Parkinson's disease; accumulation of AIMP2 in these cells lead to catecholaminergic cell death (2). AIMP2 can also bind to TRAF2, a key player in the TNF-alpha signaling pathway, causing the ubiquitination of TRAF2 by cIAP1, leading to TNF-alpha-dependent apoptosis (3). Finally, AIMP2 has been suggested to function as a tumor suppressor (4).

AIMP2 Antibody - References

- Quevillon S, Robinson JC, Berthonneau E, et al. Macromolecular assemblage of aminoacyl-tRNA synthetases: identification of protein-protein interactions and characterization of a core protein. *J. Mol. Biol.* 1999; 285:183-95.
- Ko HS, von Coelln R, Sriram SR, et al. Accumulation of the authentic parkin substrate aminoacyl-tRNA synthetase cofactor, p38/JTV-1, leads to catecholaminergic cell death. *J. Neurosci.* 2005; 25:7968-78.
- Choi JW, Kim DG, Park MC, et al. AIMP2 promotes TNFalpha-dependent apoptosis via ubiquitin-mediated degradation of TRAF2. *J. Cell Sci.* 2009; 122:2710-5.
- Choi JW, UM JY, Kundu JK, et al. Multidirectional tumor-suppressive activity of AIMP2/p38 and

the enhanced susceptibility of AIMP2
heterozygous mice to carcinogenesis.
Carcinogenesis 2009; 30:1638-44.