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# MCA1 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6721b

## Product Information

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| **Application** | WB, IHC-P, E |
| **Primary Accession** | Q12904 |
| **Other Accession** | P31230, O54873 |
| **Reactivity** | Human |
| **Predicted** | Hamster, Mouse |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Isotype** | Rabbit IgG |
| **Clone Names** | RB18767 |
| **Calculated MW** | 34353 |
| **Antigen Region** | 242-268 |

## Additional Information

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| **Gene ID** | 9255 |
| **Other Names** | Aminoacyl tRNA synthase complex-interacting multifunctional protein 1, Multisynthase complex auxiliary component p43, Endothelial monocyte-activating polypeptide 2, EMAP-2, Endothelial monocyte-activating polypeptide II, EMAP-II, Small inducible cytokine subfamily E member 1, AIMP1, EMAP2, SCYE1 |
| **Target/Specificity** | This MCA1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 242-268 amino acids from the C-terminal region of human MCA1. |
| **Dilution** | WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration. |
| **Format** | Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS. |
| **Storage** | Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles. |
| **Precautions** | MCA1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures. |

## Protein Information

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| **Name** | AIMP1 |

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| **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 endothelian 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} |

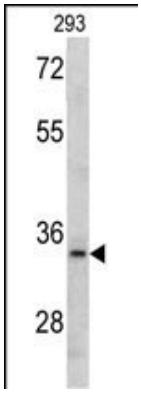
## Background

MCA1 is a cytokine that is specifically induced by apoptosis, and it is involved in the control of angiogenesis, inflammation, and wound healing. The release of this cytokine renders the tumor-associated vasculature sensitive to tumor necrosis factor. The precursor protein is identical to the p43 subunit, which is associated with the multi-tRNA synthetase complex, and it modulates aminoacylation activity of tRNA synthetase in normal cells. This protein is also involved in the stimulation of inflammatory responses after proteolytic cleavage in tumor cells.

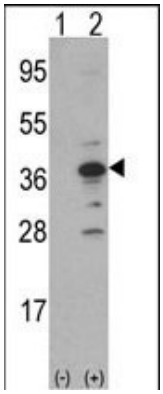
## References

Awasthi,N., Lab. Invest. 89 (1), 38-46 (2009)
Sen,E., Clin Lung Cancer 9 (3), 166-170 (2008)

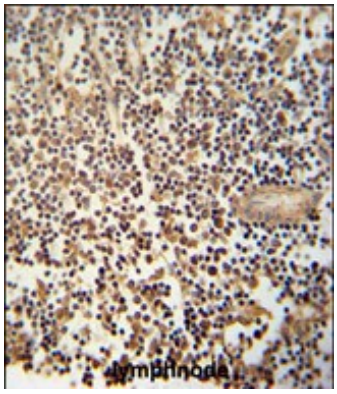
## Images




Western blot analysis of MCA1 antibody (C-term) (Cat. #AP6721b) in 293 cell line lysates (35ug/lane). MCA1 (arrow) was detected using the purified Pab.




Western blot analysis of MCA1(arrow) using rabbit polyclonal MCA1 Antibody (N-term) (Cat. #AP6721b). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the MCA1 gene (Lane 2) (Origene Technologies).




MCA1 Antibody (C-term) (Cat. #AP6721b) immunohistochemistry analysis in formalin fixed and paraffin embedded human lymphnode followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the MCA1 Antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.