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CD47 / IAP (Integrin Associated Protein) Antibody - With BSA and Azide

Mouse Monoclonal Antibody [Clone IAP/964]
Catalog # AH12752

Product Information

Application	IHC, IF, FC
Primary Accession	Q08722
Other Accession	961, 446414
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Clone Names	IAP/964
Calculated MW	35214

Additional Information

Gene ID	961
Other Names	Leukocyte surface antigen CD47, Antigenic surface determinant protein OA3, Integrin-associated protein, IAP, Protein MER6, CD47, CD47, MER6
Application Note	IHC~~1:100~500 IF~~1:50~200 FC~~1:10~50
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	CD47 / IAP (Integrin Associated Protein) Antibody - With BSA and Azide is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CD47
Synonyms	MER6
Function	Adhesive protein that mediates cell-to-cell interactions (PubMed: 11509594, PubMed:15383453). Acts as a receptor for thrombospondin THBS1 and as modulator of integrin signaling through the activation of heterotrimeric G proteins (PubMed:19004835, PubMed:7691831, PubMed:8550562). Involved in signal transduction, cardiovascular homeostasis, inflammation, apoptosis, angiogenesis, cellular self-renewal, and immunoregulation (PubMed:11509594, PubMed:15383453, PubMed:19004835, PubMed:27742621, PubMed:32679764, PubMed:7691831, PubMed:8550562). Plays a role in modulating pulmonary endothelin EDN1 signaling (PubMed:27742621). Modulates nitrous oxide (NO) signaling, in response to

	THBS1, hence playing a role as a pressor agent, supporting blood pressure (By similarity). Plays an important role in memory formation and synaptic plasticity in the hippocampus (By similarity). Receptor for SIRPA, binding to which prevents maturation of immature dendritic cells and inhibits cytokine production by mature dendritic cells (PubMed:11509594). Interaction with SIRPG mediates cell-cell adhesion, enhances superantigen-dependent T-cell-mediated proliferation and costimulates T-cell activation (PubMed:15383453). Positively modulates FAS-dependent apoptosis in T-cells, perhaps by enhancing FAS clustering (By similarity). Plays a role in suppressing angiogenesis and may be involved in metabolic dysregulation during normal aging (PubMed:32679764). In response to THBS1, negatively modulates wound healing (By similarity). Inhibits stem cell self- renewal, in response to THBS1, probably by regulation of the stem cell transcription factors POU5F1/OCT4, SOX2, MYC/c-Myc and KLF4 (By similarity). May play a role in membrane transport and/or integrin dependent signal transduction (PubMed:7691831). May prevent premature elimination of red blood cells (By similarity).
Cellular Location	Cell membrane; Multi-pass membrane protein
Tissue Location	Very broadly distributed on normal adult tissues, as well as ovarian tumors, being especially abundant in some epithelia and the brain. Macrophages (PubMed:39121194)

Background

This antibody reacts with Ig domain of CD47 protein. CD47, originally named integrin-associated protein (IAP), is a 50kDa protein containing five membrane-spanning sequences and a short cytoplasmic tail. CD47 plays a role in both cell adhesion by acting as an adhesion receptor for THBS1 on platelets, and in the modulation of integrins. It is important in memory formation and synaptic plasticity in the hippocampus. CD47 may play a role in membrane transport and/or integrin dependent signal transduction.

References

Edris B et. al. Proc Natl Acad Sci USA 109:6656-61 (2012). | Willingham SB et. al. Proc Natl Acad Sci USA 109:6662-7 (2012)

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