abcam

ab256291

Alexa Fluor® 647 Anti-CD47 antibody [OX-101]

Anti-CD47 antibody [OX-101] conjugated to Alexa Fluor® 647 - suitable for flow cytometry, and reacts with rat samples. Clone [OX-101] is a mouse monoclonal antibody cited in 2 publications.

Design your panel with our interactive flow cytometry panel builder. Click here.

Key facts

Isotype	IgG1
Host species	Mouse
Conjugation	Alexa Fluor® 647
Excitation/Emission	Ex: 650nm, Em: 665nm
Storage buffer	Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	OX-101
Purification technique	Affinity purification
Light chain type	kappa
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Rat
Dilution info	1/2500
Notes	-

Target data

See full target information Cd47

Function	Adhesive protein that mediates cell-to-cell interactions. Acts as a receptor for thrombospondin THBS1 and as modulator of integrin signaling through the activation of heterotrimeric G proteins. Involved in signal transduction, cardiovascular homeostasis, inflammation, apoptosis, angiogenesis, cellular self-renewal, and immunoregulation. Plays a role in modulating pulmonary endothelin EDN1 signaling (By similarity). 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 (PubMed:9592107). Receptor for SIRPA, binding to which prevents maturation of immature dendritic cells and inhibits cytokine production by mature dendritic cells. Interaction with SIRPG mediates cell-cell adhesion, enhances superantigen-dependent T-cell-mediated proliferation and costimulates T-cell activation (By similarity). 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 (By similarity). In response to THBS1, negatively modulates wound healing. 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 (By similarity). May prevent premature elimination of red blood cells (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle, Stable for 12 months at -20°C, Store in the dark

Notes

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Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	CD47 also referred to as integrin-associated protein carries a molecular weight of approximately 50 kDa. This protein is broadly expressed across various cell types notably on erythrocytes leukocytes and endothelial cells. Its transmembrane glycoprotein structure allows it to perform various cellular functions. CD47 interacts with specific ligands prominently SIRPα which are present on immune cells such as macrophages and dendritic cells. The engagement of CD47 with these ligands plays a major role in cellular signaling processes.
Biological function summary	CD47 functions as a "don't eat me" signal inhibiting phagocytosis by binding to SIRPα on macrophages. This protein is also important for cell adhesion and migration and can modulate interactions with integrins. While not a part of a large complex CD47 associates with various cytoskeletal and membrane proteins to maintain cellular architecture and transmission of mechanical forces. Additionally its interaction with thrombospondins influences angiogenesis and nitric oxide signaling.
Pathways	CD47 is extensively involved in the regulation of the immune response and angiogenesis. The interaction between CD47 and SIRPα plays a part in the regulation of macrophage activity impacting the immune signaling pathway. CD47 also interacts with integrins allowing it to contribute to the angiogenesis pathway which is critical in the formation of new blood vessels. These interactions help coordinate complex cellular responses and maintain tissue homeostasis.
Associated diseases and disorders	CD47 levels have associations with cancer and chronic inflammatory diseases. In cancer CD47 overexpression can allow tumor cells to evade the immune response by downregulating phagocytosis through SIRPα interaction. Therapeutically targeting CD47 using agents like anti-CD47 antibodies shows potential for enhancing anti-tumor immunity. Additionally CD47 is involved in atherosclerosis where its interaction with thrombospondin-1 contributes to disease pathogenesis by affecting nitric oxide signaling and vascular remodeling.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

We do not recommend this combination. It is not covered by our product promise.

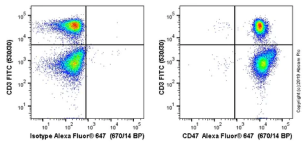
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1 product image



Flow Cytometry - Alexa Fluor® 647 Anti-CD47 antibody [OX-101] (ab256291)

CD47 Flow Cytometry staining using mouse Anti-CD47 antibody

Lewis rat splenocytes stained with ab256291 (right) or mouse IgG1κ Alexa Fluor® 647 isotype (left). Lewis rat splenocytes were incubated for 30 min on ice in 1x PBS / 10 % rat serum to block FC receptors and non-specific protein-protein interaction followed by the antibody (ab256291) or mouse IgG1κ Alexa Fluor® 647 isotype (1x 10^6 in 100 µl at 0.2 µg/ml (1/2500)) for 30 min on ice. The cells were simultaneously stained with CD3.
Acquisition of >30,000 events were collected using a 40 mW Red laser (640nm) and 670/14 bandpass filter. Events were gated on viable lymphocytes.

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