abcam

ab244597

Anti-Endothelium, macrophages and red blood cells antibody [OX-43] - BSA and Azide free

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	OX-43
Purification technique	Affinity purification
Light chain type	kappa

Reactivity data

Flow Cyt

Tested

Species	Rat
Dilution info	0.2 µg/mL
Notes	-

IHC-Fr

Tested

Species	Rat
Dilution info	1 µg/mL
Notes	-

Target data

See full target information Endothelium, macrophages and red blood cells

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	+4°C
Aliquoting information	Upon delivery aliquot
Storage information	Do Not Freeze

Notes

Want a custom formulation?
This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com

Supplementary info

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

Activity summary	The endothelium macrophages and red blood cells form an essential network within the circulatory system. The endothelium lines the interior surface of blood vessels playing an important role in vascular biology. Macrophages present in the

	blood as well as tissues act in innate immunity by engulfing pathogens and debris. Red blood cells carry oxygen from the lungs to the body tissues and return carbon dioxide from tissues to the lungs. The macrophages in blood known as blood macrophages are distinguished by markers such as CD14 and CD68 and can be analyzed using flow cytometry techniques. Understanding these cells is fundamental in immunology and hematological studies.
Biological function summary	The endothelium forms a selective barrier that regulates the exchange of substances between the bloodstream and surrounding tissues. Macrophages on the other hand are versatile cells involved in inflammation tissue repair and immune responses. They secrete cytokines and chemokines that recruit other immune cells to the site of infection or injury. Endothelium and macrophages interact dynamically influencing vascular tone and response to inflammation. The red blood cells lacking a nucleus optimize oxygen transport due to their biconcave shape and high hemoglobin content around 270 million molecules per cell.
Pathways	Endothelium and macrophages participate actively in the inflammatory response and coagulation pathways. The nitric oxide pathway for example involves endothelium-derived nitric oxide which relaxes vascular smooth muscle and regulates blood pressure. Macrophages generate inflammatory mediators like TNF-alpha and interleukin-6 components of the cytokine signaling pathway that modulate immune responses. Both cell types relate to proteins such as intercellular adhesion molecule-1 (ICAM-1) on endothelial cells facilitating leukocyte transmigration during immune surveillance and inflammation.
Associated diseases and disorders	Endothelium dysfunction and macrophage activation relate closely to atherosclerosis and systemic inflammatory disorders. Atherosclerosis involves lipid accumulation in arterial walls where endothelial cells and macrophages contribute to plaque formation. Red blood cells can aggravate this process if they hemolyze within plaques. Disorders like rheumatoid arthritis feature aberrant activation of both endothelium and macrophages leading to chronic inflammation. Proteins such as VCAM-1 and E-selectin expressed on endothelial cells are associated with these vascular and systemic inflammatory diseases highlighting their role in cell adhesion and recruitment of immune cells.

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

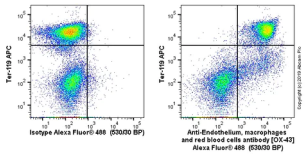
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

2 product images



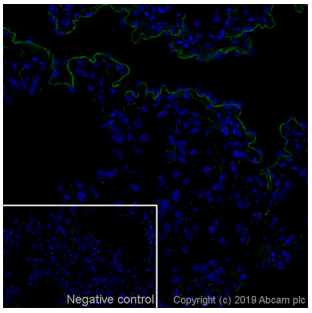
Flow Cytometry - Anti-Endothelium, macrophages and red blood cells antibody [OX-43] - BSA and Azide free (ab244597)

Endothelium, macrophages and red blood cells Flow Cytometry staining using mouse Anti-Endothelium, macrophages and red blood cells antibody

This data was developed using the same antibody clone in a different buffer formulation (ab243850)
Lewis rat bone marrow cells stained with ab243850 (right) or mouse IgG1κ (ab170190) isotype (left). Lewis rat bone marrow cells 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 (ab243850) or mouse IgG1κ (ab170190) ($1x^{106}$ in 100 µl at 0.2 µg/ml) for 30 min on ice.

The secondary antibody Goat anti-mouse IgG H&L (Alexa Fluor ® 488, pre-adsorbed) (ab150117) was used at 1/2000 dilution for 30 min on ice. The cells were simultaneously stained with Ter-119 antibody.

Acquisition of >30,000 events were collected using a 50 mW Blue laser (488nm) and 530/30 bandpass filter. Events were gated on viable cells



Immunohistochemistry (Frozen sections) - Anti-Endothelium, macrophages and red blood cells antibody [OX-43] - BSA and Azide free (ab244597)

Endothelium, macrophages and red blood cells Immunohistochemistry (Frozen sections) staining using mouse Anti-Endothelium, macrophages and red blood cells antibody

This data was developed using the same antibody clone in a different buffer formulation containing PBS and sodium azide (ab243850).
IHC image of Endothelium, macrophages and red blood cells staining in a section of frozen normal Rat Lung.

The section was fixed using 10% formaldehyde in 1XPBS for 10 minutes. No antigen retrieval step was performed prior to staining. Non-specific protein-protein interactions were then blocked in TBS containing 0.025% (v/v) Triton X-100, 0.3M glycine and 1% (w/v) BSA for 1h at room temperature. The section was then incubated overnight at +4°C in TBS containing 0.025% (v/v) Triton X-100 and 1% (w/v) BSA with ab243850 at 1µg/ml. The section was then incubated with ab150117 (Goat Anti-Mouse IgG H&L (Alexa Fluor® 488) preabsorbed, (Shown in green) 1/1000) for 1 hour at room temperature. DAPI was used to stain the cell nuclei (blue). The secondary-only

control insert image is taken from an identical assay without primary antibody. The section was then mounted using Fluoromount®.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

For IHC staining systems (automated and non-automated), customers should optimize variable parameters such as antibody concentrations and incubation times.

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