abcam

ab327881

Anti-IL-6R antibody [EPR30382-502] - BSA and Azide free, low endotoxin

Recombinant | RabMAb | Advanced Validation

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR30382-502
Purification technique	Affinity purification Protein A

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	1/100
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/100
Notes	-

WB

Not recommended

Species	Mouse
Dilution info	-
Notes	-

FuncS

Tested

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information Il6ra

Function

Part of the receptor for interleukin 6. Binds to IL6 with low affinity, but does not transduce a signal. Signal activation necessitate an association with IL6ST. Activation leads to the regulation of the immune response, acute-phase reactions and hematopoiesis. The interaction with membrane-bound IL6R and IL6ST stimulates 'classic signaling', the restricted expression of the IL6R limits classic IL6 signaling to only a few tissues such as the liver and some cells of the immune system. Whereas the binding of IL6 and soluble IL6R to IL6ST stimulates 'trans-signaling'. Alternatively, 'cluster signaling' occurs when membrane-bound IL6:IL6R complexes on transmitter cells activate IL6ST receptors on neighboring receiver cells. Interleukin-6 receptor subunit alpha. Signaling via the membrane-bound IL6R is mostly regenerative and anti-inflammatory (Probable). Drives naive CD4(+) T cells to the Th17 lineage, through 'cluster signaling' by dendritic cells (PubMed:27893700). Soluble interleukin-6 receptor subunit alpha. Soluble form of IL6 receptor (sIL6R) that acts as an agonist of IL6 activity (PubMed:11113088). The IL6:sIL6R complex (hyper-IL6) binds to IL6ST/gp130 on cell surfaces and induces signaling also on cells that do not express membrane-bound IL6R in a process

called IL6 'trans-signaling'. sIL6R is causative for the pro-inflammatory properties of IL6 and an important player in the development of chronic inflammatory diseases (By similarity). In complex with IL6, is required for induction of VEGF production (By similarity). Plays a protective role during liver injury, being required for maintenance of tissue regeneration (PubMed:11113088). 'Trans-signaling' in central nervous system regulates energy and glucose homeostasis (PubMed:28402851).

Storage

Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

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.

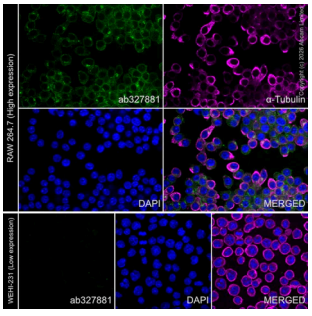
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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5 product images



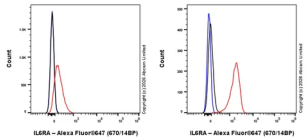
Immunocytochemistry/ Immunofluorescence - Anti-IL-6R antibody [EPR30382-502] - BSA and Azide free, low endotoxin (ab327881)

IL-6R Immunocytochemistry/ Immunofluorescence staining of RAW 264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage) using rabbit Anti-IL-6R antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized RAW 264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage) and WEHI-231 (mouse B cell lymphoma B lymphocyte) labelling IL-6R with ab327881 at 1/100 (10.42 µg/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 dilution (Green).

Confocal image showing membranous and cytoplasmic staining in RAW 264.7 cells and no staining in WEHI-231 cells(shown in green). The counterstain was observed in magenta.
Low expression: WEHI-231.
Nuclear DNA was labelled with DAPI (shown in blue). Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

ab7291 Anti-alpha Tubulin mouse monoclonal antibody was used to counterstain tubulin at 1/1000 dilution (Magenta). The Nuclear counterstain was DAPI (Blue).



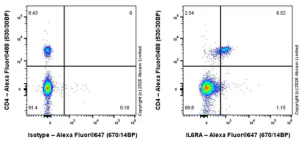
Flow Cytometry - Anti-IL-6R antibody [EPR30382-502] - BSA and Azide free, low endotoxin (ab327881)

IL-6R Flow Cytometry staining of RAW 264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage, Right) using rabbit Anti-IL-6R antibody

Flow cytometric analysis of RAW 264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage, Right) and WEHI-231 (mouse B cell lymphoma B lymphocyte, Left) labelling IL-6R with ab327881 at 1/100 dilution (1ug) / Red compared with a Rabbit monoclonal IgG (ab172730) / Black isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

Goat anti-Rabbit IgG (Alexa Fluor® 647, ab150083) at 1/5000 dilution was used as the secondary antibody.

Gated on viable cells. Low expression: WEHI-231.



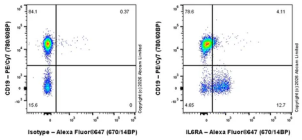
Flow Cytometry - Anti-IL-6R antibody [EPR30382-502] - BSA and Azide free, low endotoxin (ab327881)

IL-6R Flow Cytometry staining of Mouse PBMC (mouse primary peripheral blood mononuclear cell) using rabbit Anti-IL-6R antibody

Flow cytometric analysis of Mouse PBMC (mouse primary peripheral blood mononuclear cell) cells labelling IL-6R with ab327881 at 1/100 dilution (1ug) / Right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

Goat anti-Rabbit IgG (Alexa Fluor® 647, ab150083) at 1/5000 dilution was used as the secondary antibody.

Gated on viable cells. Cells were co-stained with anti-CD4 conjugated to Alexa Fluor®488.



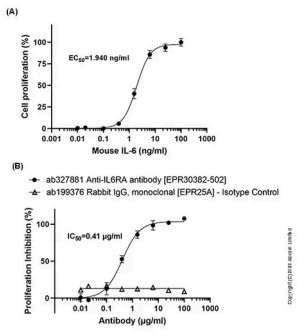
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IL-6R Flow Cytometry staining of Mouse PBMC (mouse primary peripheral blood mononuclear cell) using rabbit Anti-IL-6R antibody

Flow cytometric analysis of Mouse PBMC (mouse primary peripheral blood mononuclear cell) cells labelling IL-6R with ab327881 at 1/100 dilution (1ug) / Right compared with a Rabbit monoclonal IgG (ab172730) / Left isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody).

Goat anti-Rabbit IgG (Alexa Fluor® 647, ab150083) at 1/5000 dilution was used as the secondary antibody.

Gated on viable cells. Cells were co-stained with anti-CD19 conjugated to PE/CY7.



Functional Studies - Anti-IL-6R antibody [EPR30382-502] - BSA and Azide free, low endotoxin (ab327881)

Proliferation inhibition of B9 cells following stimulation with mouse IL-6 in the presence of either an anti-IL6RA antibody (ab327881) or an IgG isotype control (ab199376).(A) Dose–response curve of cell proliferation of B9 cells exposed to increasing concentrations of mouse IL-6.(B) Proliferation inhibition induced by 100 ng/mL mouse IL-6 following treatment with anti-IL6RA antibody (circles, solid line) or IgG isotype control (triangles, dotted line) across a range of concentrations. The IC_{50} for inhibition of proliferation is 0.41 µg/mL.B9 cells were seeded at 3×10^4 cells per well in a 96-well plate. Cells were pre-incubated with a dilution series of anti-IL6RA antibody for 6 hours prior

to IL-6 stimulation and then cultured for 48 hours in medium containing 5% FBS. Proliferation was analysed by luminescent assay and recorded using a Microplate Reader at 560nm emission.

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