abcam

ab83053

Anti-IL-6R antibody [AP-MAB0848]

Key facts

Isotype	IgG2b
Host species	Rat
Storage buffer	Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Full Length Protein corresponding to Mouse Il6ra. Database link P22272
Carrier free	Yes
Clone number	AP-MAB0848
Concentration	2 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	The IgG fraction of culture supernatant was purified by Protein A/G affinity chromatography and lyophilized from a 0.2 µm filtered solution in phosphate buffered saline.

Reactivity data

IP

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Flow Cyt

Expected

Species	Mouse
Dilution info	-
Notes	ab18536 - Rat monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

WB

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

FuncS (Neut/Block)

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
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

Shipped at conditions	Blue Ice
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

Notes

This monoclonal can be used to block IL-6/IL-6R interactions.

Supplementary info

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

Activity summary	IL-6R also known as the IL-6 receptor or IL-6R protein is a transmembrane protein with an approximate mass of 80-90 kDa. This receptor is found on the surface of various cells including hepatocytes leukocytes and immune cells like T-cells and

	macrophages. IL-6R binds to interleukin-6 (IL-6) a cytokine and plays an important role in immune response regulation. The receptor exists in both membrane-bound and soluble forms each contributing to diverse signaling events.
Biological function summary	IL-6 receptor function involves mediating the effects of IL-6 through its interaction with glycoprotein 130 (gp130) forming a signaling complex. This complex initiates intracellular pathways that lead to gene expression changes necessary for immune responses inflammation and hematopoiesis. When IL-6 binds IL-6R the complex formation with gp130 triggers downstream signaling that impacts cell growth differentiation and survival.
Pathways	IL-6R is central to the JAK/STAT signaling pathway one of the two main pathways activated by IL-6 signaling. It's also involved in the MAPK cascade contributing to cellular responses such as proliferation and differentiation. Through these pathways IL-6R interacts with other proteins like JAK kinases and STAT transcription factors coordinating cellular responses to external signals.
Associated diseases and disorders	IL-6R is associated with inflammatory diseases such as rheumatoid arthritis and certain cancers. In rheumatoid arthritis overexpression of IL-6R leads to persistent inflammation and joint damage. In cancer IL-6/IL-6R signaling promotes tumorigenesis and cancer cell survival through interactions with proteins like STAT3. Understanding these connections aids in developing therapeutic interventions targeting IL-6R in various pathological conditions.

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.

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