abcam

ab47215

Anti-IL-6R antibody [B-R6]-BSA and Azide free

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.3 - 7.5 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing IL6R protein. The exact immunogen used to generate this antibody is proprietary information. Database link P08887
Carrier free	Yes
Clone number	B-R6
Purification technique	Ion exchange chromatography
Specificity	Recognises the Interleukin-6 Ra subunit, IL-6 Ra, IL-6 R, a 80 kDa protein. Inhibits IL-6 induced proliferation of XG-1 cells.
Light chain type	kappa
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	This antibody was sterile filtered through 0.22 µm and treated to remove endotoxins. It is carrier and preservative free.

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Target data

See full target information IL6R

Function

Part of the receptor for interleukin 6. Binds to IL6 with low affinity, but does not transduce a signal (PubMed:28265003). Signal activation necessitate an association with IL6ST. Activation leads to the regulation of the immune response, acute-phase reactions and hematopoiesis (PubMed:30995492, PubMed:31235509). 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 (Probable). Isoform 1. 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 (By similarity). Isoform 2. Soluble form of IL6 receptor (sIL6R) that acts as an agonist of IL6 activity (PubMed:21990364). 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 (PubMed:21990364). In complex with IL6, is required for induction of VEGF production (PubMed:12794819). Plays a protective role during liver injury, being required for maintenance of tissue regeneration (By similarity). 'Trans-signaling' in central nervous system regulates energy and glucose homeostasis (By similarity). Soluble interleukin-6 receptor subunit alpha. Soluble form of IL6 receptor (sIL6R) that acts as an agonist of IL6 activity (PubMed:21990364). 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 (PubMed:21990364). In complex with IL6, is required for induction of VEGF production (PubMed:12794819). Plays a protective role during liver injury, being required for maintenance of tissue regeneration (By similarity). 'Trans-signaling' in central nervous system regulates energy and glucose homeostasis (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

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.

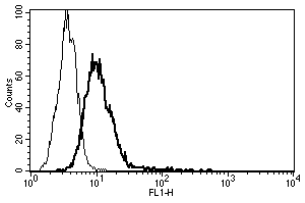
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1 product image



Flow Cytometry - Anti-IL-6R antibody [B-R6]-BSA and Azide free (ab47215)

IL-6R Flow Cytometry staining using mouse Anti-IL-6R antibody

ab27321 at 10µl/106 cells staining IL6R in U266 cell line by Flow Cytometry. This image was generated using the ascites version of the product. This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab27321).

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