abcam

**ab34315**

# Anti-CD130 (gp130) antibody [B-R3] - BSA and Azide free

## Key facts

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| **Isotype** | IgG2a |
| **Host species** | Mouse |
| **Storage buffer** | pH: 7.2 Constituents: PBS |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | Chemical / Small Molecule corresponding to IL6ST. |
| **Carrier free** | Yes |
| **Clone number** | B-R3 |
| **Specificity** | Recognizes a 130 kDa protein. |
| **Concentration** | 1 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |
| **Purification notes** | Purified by Ion exchange chromatography, sterile-filtered through 0.22 µm. Treated to remove endotoxins. |

## Reactivity data

## FuncS

### Expected

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| **Species** | Human |
| **Dilution info** | Use at an assay dependent concentration. |

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|---|---|
| **Notes** | - |

## ELISA

### Expected

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|---|---|
| **Species** | Human |
| **Dilution info** | Use at an assay dependent concentration. |
| **Notes** | - |

## Flow Cyt

### Expected

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | ab170191 - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody. |

# Target data

See full target information IL6ST

**Function**

Signal-transducing molecule (PubMed:2261637). The receptor systems for IL6, LIF, OSM, CNTF, IL11, CTF1 and BSF3 can utilize IL6ST for initiating signal transmission. Binding of IL6 to IL6R induces IL6ST homodimerization and formation of a high-affinity receptor complex, which activates the intracellular JAK-MAPK and JAK-STAT3 signaling pathways (PubMed:19915009, PubMed:2261637, PubMed:23294003). That causes phosphorylation of IL6ST tyrosine residues which in turn activates STAT3 (PubMed:19915009, PubMed:23294003, PubMed:25731159). In parallel, the IL6 signaling pathway induces the expression of two cytokine receptor signaling inhibitors, SOCS1 and SOCS3, which inhibit JAK and terminate the activity of the IL6 signaling pathway as a negative feedback loop (By similarity). Also activates the yes-associated protein 1 (YAP) and NOTCH pathways to control inflammation-induced epithelial regeneration, independently of STAT3 (By similarity). Acts as a receptor for the neuroprotective peptide humanin as part of a complex with IL27RA/WSX1 and CNTFR (PubMed:19386761). Mediates signals which regulate immune response, hematopoiesis, pain control and bone metabolism (By similarity). Has a role in embryonic development (By similarity). Essential for survival of motor and sensory neurons and for differentiation of astrocytes (By similarity). Required for expression of TRPA1 in nociceptive neurons (By similarity). Required for the maintenance of PTH1R expression in the osteoblast lineage and for the stimulation of PTH-induced osteoblast differentiation (By similarity). Required for normal trabecular bone mass and cortical bone composition (By similarity). Isoform 2. Binds to the soluble IL6:sIL6R complex (hyper-IL6), thereby

blocking IL6 trans-signaling. Inhibits sIL6R-dependent acute phase response (PubMed:11121117, PubMed:21990364, PubMed:30279168). Also blocks IL11 cluster signaling through IL11R (PubMed:30279168).

## Storage

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| **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 |

## Notes

ab34315 inhibits IL6, IL11, CNTF, LIF and OSM activity. Inhibits OSM and CNTF binding

## Supplementary info

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

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| **Activity summary** | CD130 also known as gp130 or the IL-6 signal transducer (IL6ST) is a protein weighing around 130 kDa. This receptor is encoded by the IL6ST gene and widely expressed on the surface of cells across multiple tissues. CD130 functions mechanically as a signal transducing receptor facilitating the assembly of receptor complexes necessary for the initiation of signal transduction. It plays a major role in cytokine receptor signaling particularly interacting with interleukin-6 (IL-6) family cytokines. |
| **Biological function summary** | CD130 functions as part of the high-affinity receptor complex for certain cytokines. It partners with other receptors such as CD126 to form a complex that initiates signaling pathways after ligand binding contributing to a range of immune responses. Its role is thorough across many cellular processes including differentiation proliferation and apoptosis. In addition to immune signaling CD130 is involved in several growth factor signaling pathways. |
| **Pathways** | CD130 serves a significant role in signal transduction particularly in the Janus kinase/signal transducers and activators of transcription (JAK/STAT) pathway. It |

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| | works in concert with related proteins like JAK1 and STAT3 to transmit signals from extracellular cytokines to the nucleus influencing gene expression. Additionally CD130 can also be found active in the MAPK/ERK pathway which is important for cellular response to growth signals. |
| **Associated diseases and disorders** | CD130 plays a connection especially to inflammatory conditions and certain cancers. Aberrant signaling involving CD130 has been linked to disorders like rheumatoid arthritis where it contributes to the inflammation process. Additionally it relates to multiple myeloma a cancer where abnormal CD130 interactions with proteins like IL-6 may enhance cell survival and proliferation presenting potential targets for therapeutic intervention. |

## 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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