abcam

ab283582

Anti-CD130 (gp130) antibody [EPR24557-5] - BSA and Azide free

Recombinant | RabMAb | KO Validated

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	EPR24557-5
Purification technique	Affinity purification Protein A

Reactivity data

IP

Not recommended

Species	Mouse, Human, Rat
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

IHC-P

Not recommended

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Mouse, Human, Rat
Dilution info	-
Notes	-

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

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

ab283582 is the carrier-free version of ab283569.

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.

Supplementary info

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

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 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

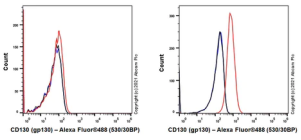
We do not recommend this combination. It is not covered by our product promise.

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

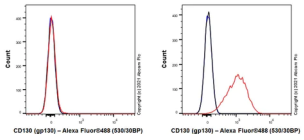


Flow Cytometry - Anti-CD130 (gp130) antibody [EPR24557-5] - BSA and Azide free (ab283582)

CD130 (gp130) Flow Cytometry staining using rabbit Anti-CD130 (gp130) antibody

This data was developed using ab283569, the same antibody clone in a different buffer formulation.
Flow cytometric analysis of Daudi (Human Burkitt's lymphoma lymphoblast) (Left) / MG-63 (human osteosarcoma fibroblast) (Right) cells labelling CD130 (gp130) with ab283569 at 1/50 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) (Blue). Goat F(ab')2 Anti-Rabbit IgG(DyLight® 488, ab98507) at 1/500 dilution was used as the secondary antibody. Gated on viable cells.

Low expression: Daudi (PMID: 2261637).



Flow Cytometry - Anti-CD130 (gp130) antibody [EPR24557-5] - BSA and Azide free (ab283582)

CD130 (gp130) Flow Cytometry staining using rabbit Anti-CD130 (gp130) antibody

This data was developed using ab283569, the same antibody clone in a different buffer formulation.
Flow cytometric analysis of Wild-type A549 (Human lung carcinoma epithelial cell) (Right) / CD130 (gp130) knockout A549 cells (Left) cells labelling CD130 (gp130) with ab283569 at 1/500 dilution (0.1ug)/ (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat F(ab')2 Anti-Rabbit IgG(DyLight® 488, ab98507) at 1/500 dilution was used as the secondary antibody. Gated on viable cells.

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