abcam

ab322916

PE Anti-CD130 (gp130) antibody [EPR24557-5]

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	PE
Excitation/Emission	Ex: 480;565nm, Em: 578nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR24557-5
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1/2500
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 duration	1-2 weeks
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.

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.

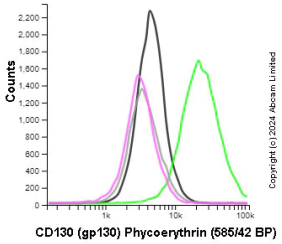
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

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1 product image



Flow Cytometry - PE Anti-CD130 (gp130) antibody [EPR24557-5] (ab322916)

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

Flow cytometry overlay histogram showing wild-type A549 (green line) and CD130 knockout A549 stained with ab322916 (magenta line). The cells were fixed with 80% methanol (5 min) and then permeabilised with 0.1% PBS-Triton X-100 for 15 min. The cells were incubated in 1x PBS containing 10% normal goat serum to block non-specific protein-protein interaction followed by the antibody (ab322916) (1x 10^6 in 100 µl at 0.2 µg/ml (1/2500)) for 30min at 22°C.

Isotype control antibody Rabbit IgG (monoclonal) Phycoerythrin Isotype Control (ab209478) was used at the same concentration and conditions as the primary antibody (wild-type A549 - black line, CD130 knockout A549 - grey line). Unlabelled sample was also used as a control (this line is not shown for the purpose of simplicity).

Acquisition of >5000 events were collected using a 50 mW Yellow/Green laser (561nm) and 585/42 bandpass filter.

This antibody gave a positive signal in cells fixed with 4% formaldehyde (10 min) / permeabilised with 0.1% PBS-Triton X-100 for 15 min under the same conditions.

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