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Anti-CD130 Antibody

Catalog # AP60469

Product Information

Application	WB, IHC, IF/IC
Primary Accession	P40189
Reactivity	Human, Mouse, Rat, Pig, Chicken, Mk
Host	Rabbit
Clonality	Polyclonal
Calculated MW	103537

Additional Information

Gene ID	3572
Other Names	Interleukin-6 receptor subunit beta; IL-6 receptor subunit beta; IL-6R subunit beta; IL-6R-beta; IL-6RB; CDw130; Interleukin-6 signal transducer; Membrane glycoprotein 130; gp130; Oncostatin-M receptor subunit alpha; CD130
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the C-term region of human CD130. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	IL6ST (HGNC:6021)
Function	Functions as a shared signal-transducing subunit not only for IL6 but also for other cytokine receptor complexes, including IL6, LIF, OSM, CNTF, IL11, CTF1, BSF3, MT-RNR2/humanin, CLCF1 and the heterodimeric complex CRLF1-CLCF1 (PubMed:11285233, PubMed:11294841, PubMed:1542794, PubMed:19386761, PubMed:2261637, PubMed:27384491, PubMed:36930708, PubMed:39532904, PubMed:8272873, PubMed:8999038, PubMed:9030543, PubMed:9188471). Engages site 2 of CNTF, CLCF1, LIF, and IL-6, and site 3 of IL27 and IL6 (PubMed:36930708). Initiates signal transmission through three mechanisms (PubMed:11285233, PubMed:11294841, PubMed:1542794, PubMed:19386761, PubMed:19915009, PubMed:2261637, PubMed:23294003). Binding of cytokines, such as IL6 or IL11 to the alpha-chains of their specific cell surface receptor triggers homodimerization of IL6ST/gp130 (PubMed:19915009, PubMed:2261637, PubMed:23294003, PubMed:8637716). In contrast, binding of other IL-6 family cytokines can

result in the formation of a IL6ST/gp130 heterodimer with another signal-transducing receptor, such as LIFR or OSMR (PubMed:1542794, PubMed:39532904, PubMed:8999038, PubMed:9030543, PubMed:9188471). Moreover, binding of CNTF or CLCF1 or the heterodimeric complex CRLF1-CLCF1 or MT-RNR2/humanin to the non- signaling receptor CNTFR induces heterodimerization of the IL6ST/gp130 with LIFR or IL27RA/WSX1 (in the case of MT-RNR2/humanin) (PubMed:11285233, PubMed:11294841, PubMed:19386761). Mechanistically, homodimerization or heterodimerization of IL6ST/gp130 activate JAK tyrosine kinases bound to their intracellular domains (PubMed:11294841, PubMed:19915009, PubMed:2261637, PubMed:23294003, PubMed:27384491, PubMed:8272873, PubMed:9030543, PubMed:9188471). These kinases subsequently phosphorylate the homodimer or heterodimer form of IL6ST/gp130 (PubMed:11285233, PubMed:11294841, PubMed:19915009, PubMed:23294003, PubMed:25731159, PubMed:9030543). The tyrosine phosphorylated signaling receptors serve in turn as docking sites for recruitment and activation of signal transducer and activators of transcription (STATs) (PubMed:11285233, PubMed:11294841, PubMed:19386761, PubMed:19915009, PubMed:23294003, PubMed:25731159, PubMed:27384491, PubMed:9030543, PubMed:9188471). The IL6 signaling pathway induces, in parallel, 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). 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).

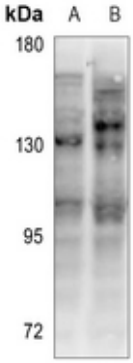
Cellular Location

[Isoform 1]: Cell membrane; Single-pass type I membrane protein

Tissue Location

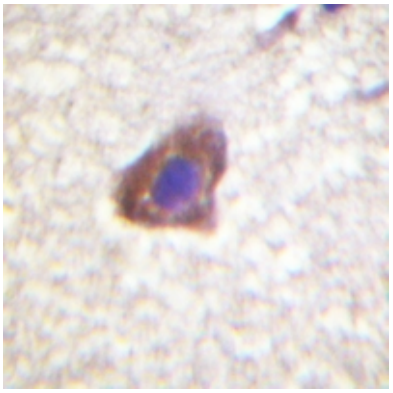
Found in all the tissues and cell lines examined (PubMed:2261637). Expression not restricted to IL6 responsive cells (PubMed:2261637).

Images

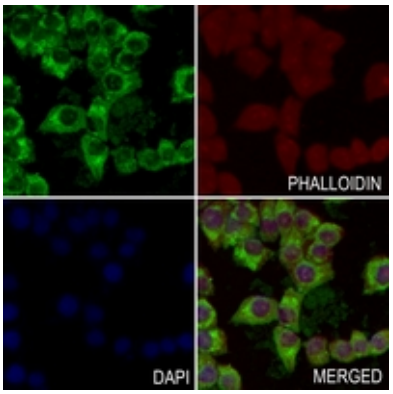


Western blot analysis of CD130 expression in HCT116 (A), AML12 (B) whole cell lysates. (Predicted band size: 103 kD; Observed band size: 130 kD)

Immunohistochemical analysis of CD130 staining in human brain formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The



section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of CD130 staining in LO2 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

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