10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

CD130 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP11107b

Product Information

Application	WB, IHC-P, E
Primary Accession	P40189
Other Accession	NP_002175.2, NP_786943.1
Reactivity	Human
Predicted	Bovine, Canine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB17993
Calculated MW	103537
Antigen Region	871-899

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, IL6ST
Target/Specificity	This CD130 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 871-899 amino acids from the C-terminal region of human CD130.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CD130 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

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).

Background

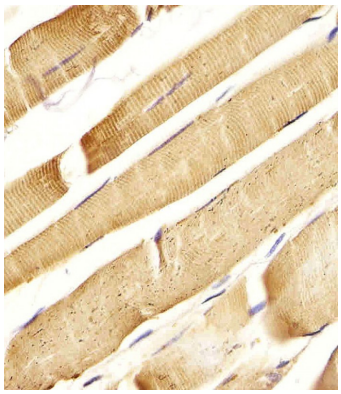
The protein encoded by this gene is a signal transducer shared by many cytokines, including interleukin 6 (IL6), ciliary neurotrophic factor (CNTF), leukemia inhibitory factor (LIF), and oncostatin M (OSM). This protein functions as a part of the cytokine receptor complex. The activation of this protein is dependent upon the binding of cytokines to their receptors. vIL6, a protein related to IL6 and encoded by the Kaposi sarcoma-associated herpesvirus, can bypass the interleukin 6 receptor (IL6R) and directly activate this

protein. Knockout studies in mice suggest that this gene plays a critical role in regulating myocyte apoptosis. Alternatively spliced transcript variants encoding distinct isoforms have been described. A related pseudogene has been identified on chromosome 17.

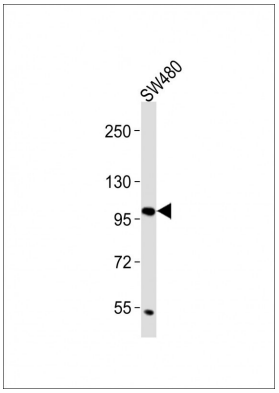
References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Goette, N.P., et al. Exp. Hematol. 38(10):868-876(2010)
Johnatty, S.E., et al. PLoS Genet. 6 (7), E1001016 (2010) :
Olsen, J.V., et al. Cell 127(3):635-648(2006)
Richards, P.J., et al. Arthritis Rheum. 54(5):1662-1672(2006)

Images



AP11107b staining CD130 in Human skeletal muscle tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



Anti-CD130 Antibody (C-term)at 1:2000 dilution + SW480 whole cell lysates Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution Predicted band size : 104 kDa Blocking/Dilution buffer: 5% NFDM/TBST.

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