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Phospho-IL6ST(Y905) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3663a

Product Information

Application	DB, E
Primary Accession	P40189
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB21495
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, IL6ST
Target/Specificity	This IL6ST Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding Y905 of human IL6ST.
Dilution	DB~~1:500 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	Phospho-IL6ST(Y905) Antibody 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).

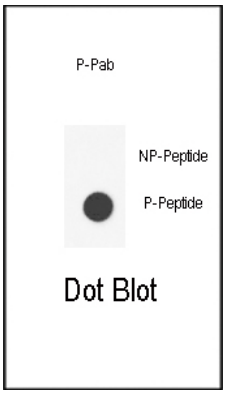
Background

IL6ST 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.

References

Lehmann,U., et.al., J. Biol. Chem. 278 (1), 661-671 (2003)
Novotny-Diermayr,V., et.al., J. Biol. Chem. 277 (51), 49134-49142 (2002)

Images



Dot blot analysis of anti-Phospho-IL6ST-Y905 Phospho-specific Pab (Cat. #AP3663a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.5ug per ml.

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