Human gp130 Antibody

Monoclonal Mouse IgG_1 Clone # 28126

Catalog Number: MAB228

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human gp130 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human (rh) IL-2 R, rhIL-4 R, or rhIL-6 R is observed.
Source	Monoclonal Mouse IgG_1 Clone # 28126
Purification	Protein A or G purified from ascites
Immunogen	*S. frugiperda* insect ovarian cell line *Sf* 21-derived recombinant human gp130 extracellular domain
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

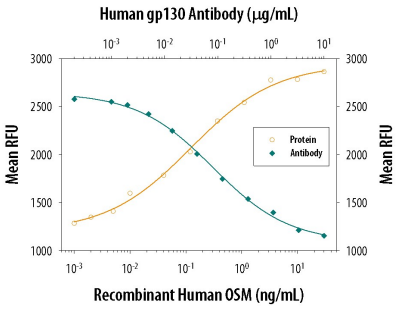
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Flow Cytometry	2.5 µg/10^6 cells	Human whole blood monocytes
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	
Neutralization	Measured by its ability to neutralize Oncostatin M/OSM-induced proliferation in the TF−1 human erythroleukemic cell line. Kitamura, T. *et al.* (1989) J. Cell Physiol. **140**:323. The Neutralization Dose (ND_{50}) is typically 0.04–0.2 µg/mL in the presence of 0.8 ng/mL Recombinant Human Oncostatin M/OSM.	

DATA

Neutralization



Cell Proliferation Induced by Oncostatin M/OSM and Neutralization by Human gp130 Antibody. Recombinant Human Oncostatin M/OSM stimulates proliferation in the TF-1 human erythroleukemic cell line (orange line), as measured by Resazurin (Catalog # AR002). Proliferation elicited by Recombinant Human Oncostatin M/OSM (0.8 ng/mL) is neutralized (green line) by increasing concentrations of Mouse Anti-Human gp130 Monoclonal Antibody (Catalog # MAB228). The ND_{50} is typically 0.04-0.2 µg/mL.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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Human gp130 Antibody

Monoclonal Mouse IgG_1 Clone # 28126

Catalog Number: MAB228

BACKGROUND

Glycoprotein 130 (gp130; also known as IL-6 signal transducer, IL-6 receptor beta, oncostatin-M alpha subunit) is a ubiquitously expressed, 130 kDa type I transmembrane glycoprotein and member of the type II subfamily, type I cytokine receptor family. Functionally, it is responsible for transduction of the IL-6 signal across the plasma membrane (1). Rat gp130 is synthesized as a 918 amino acid (aa) precursor with a 22 aa signal sequence, a 596 aa extracellular domain (ECD), a 22 aa transmembrane region, and a 278 aa cytoplasmic tail. Eleven potential N-linked glycosylation sites are found within the rat gp130 ECD (1). The ECD also contains an N terminal immunoglobulin (Ig)-like C2-type domain, followed by the cytokine receptor homology region (CHR) which is made up of two fibronectin type III-like domains and a WSXWS motif, and three additional fibronectin type III-like domains (2). The domains in the CHR are the structural hallmarks of the hematopoietic cytokine receptor family (2). Human gp130 shares 73% and 79% aa sequence identity with mouse and rat gp130, respectively. Gp130 serves as the signal transducing receptor subunit for the IL-6-type cytokines consisting of interleukin (IL)-6, IL-11, leukemia inhibitory factor (LIF), oncostatin M (OSM), ciliary neurotrophic factor (CNTF), new neurotrophin factor-1 (NNT-1), IL-27, cardiotrophin-1 (CT-1), and cardiotrophin like cytokine (CLC) (2 - 5). These cytokines are involved in a variety of functions including the modulation of inflammatory and immune responses, heart development, fertility, and many other activities (2).

References:

1. Wang, Y. et al. (1992) Genomics 14:666.
2. Muller-Newen, G. (2003) Sci. STKE pe40.
3. Heinrich, P.C. et al. (2003) Biochem. J. 374:1.
4. Stuhlmann-Laeisz, C. et al. (2006) Mol. Biol. Cell 17:2986.
5. Fischer, P. and D. Hilfiker-Kleiner (2008) Br. J. Pharmacol. 153:S414.

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