

## DESCRIPTION

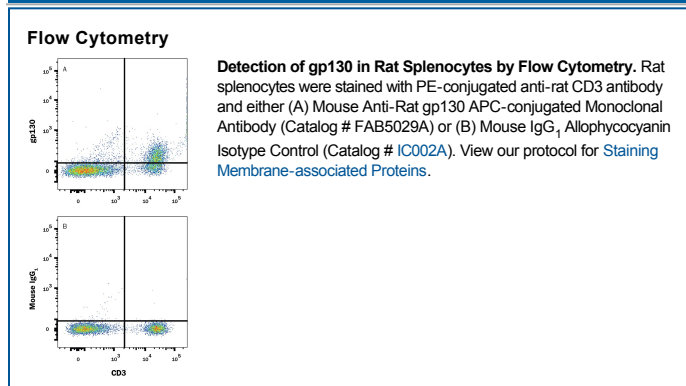
<b>Species Reactivity</b>	Rat
<b>Specificity</b>	Detects rat gp130 in direct ELISAs. In direct ELISAs, no cross-reactivity with recombinant human or recombinant mouse gp130 is observed.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 745314
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant rat gp130 Gln23-Glu618 (predicted) Accession # P40190
<b>Conjugate</b>	Allophycocyanin Excitation Wavelength: 620-650 nm Emission Wavelength: 660-670 nm
<b>Formulation</b>	Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.  *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

## 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
<b>Flow Cytometry</b>	10 $\mu$ L/10 <sup>6</sup> cells	See Below

## DATA



## PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Do not freeze.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, 2 to 8 °C as supplied.</li> </ul>

**BACKGROUND**

Glycoprotein 130 (gp130), also known as IL-6 signal transducer, IL-6 receptor beta, and 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 IL-6 family member signals 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 a cytokine receptor homology region (CHR) that 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). Over aa 23-618, rat gp130 shares 86% and 75% aa sequence identity with mouse and human gp130, respectively. Gp130 serves as a signal transducing receptor subunit for IL-6-type cytokines consisting of IL-6, IL-11, Leukemia Inhibitory Factor (LIF), Oncostatin M (OSM), Ciliary Neurotrophic Factor (CNTF), IL-27, IL-35, Cardiotrophin-1 (CT-1), Cardiotrophin-2 (CT-2), and Cardiotrophin Like Cytokine (CLC) (2-7). 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.
6. Garbers, C. *et al.* (2015) *Curr. Opin. Immunol.* **34**:75.
7. Collison, L.W. *et al.* (2012) *Nat. Immunol.* **13**:290.