

## DESCRIPTION

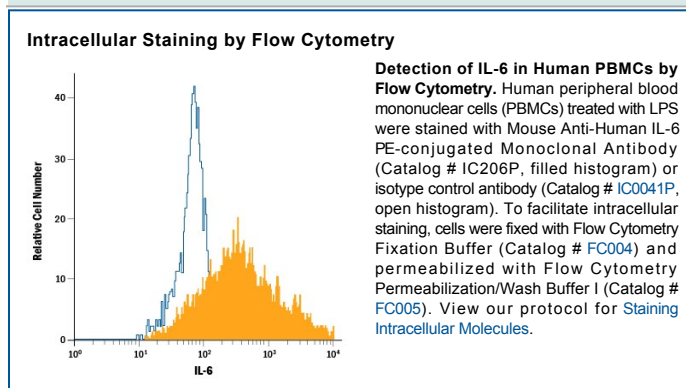
|                           |                                                                                                                                                                                                                                                                                                                        |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                                                                  |
| <b>Specificity</b>        | Detects human IL-6 in direct ELISAs. Does not cross-react with recombinant IL-6 from mouse, rat, or pig.                                                                                                                                                                                                               |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>2B</sub> Clone # 1936                                                                                                                                                                                                                                                                        |
| <b>Purification</b>       | Protein A or G purified from ascites                                                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant human IL-6<br>Val30-Met212<br>Accession # P05231                                                                                                                                                                                                                                   |
| <b>Conjugate</b>          | Phycoerythrin<br>Excitation Wavelength: 488 nm<br>Emission Wavelength: 565-605 nm                                                                                                                                                                                                                                      |
| <b>Formulation</b>        | Supplied in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details.<br><br>*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.

|                                                 | <b>Recommended Concentration</b> | <b>Sample</b> |
|-------------------------------------------------|----------------------------------|---------------|
| <b>Intracellular Staining by 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

Interleukin 6 (IL-6) is a pleiotropic  $\alpha$ -helical cytokine that plays important roles in acute phase reactions, inflammation, hematopoiesis, bone metabolism, and cancer progression. IL-6 activity is essential for the transition from acute inflammation to either acquired immunity or chronic inflammatory disease. It is secreted by multiple cell types as a 22-28 kDa phosphorylated and variably glycosylated molecule (1-4). Mature human IL-6 is 183 amino acids (aa) in length and shares 41% aa sequence identity with mouse and rat IL-6 (5). Alternate splicing generates several isoforms with internal deletions, some of which exhibit antagonistic properties (6-9). Human IL-6 is equally active on mouse and rat cells (10). IL-6 induces signaling through a cell surface heterodimeric receptor complex composed of a ligand binding subunit (IL-6 R) and a signal transducing subunit (gp130). IL-6 binds to IL-6 R, triggering IL-6 R association with gp130 and gp130 dimerization (11). gp130 is also a component of the receptors for CLC, CNTF, CT-1, IL-11, IL-27, LIF, and OSM (12). Soluble forms of IL-6 R are generated by both alternate splicing and proteolytic cleavage (3). In a mechanism known as trans-signaling, complexes of soluble IL-6 and IL-6 R elicit responses from gp130-expressing cells that lack cell surface IL-6 R (3). Trans-signaling enables a wider range of cell types to respond to IL-6, as the expression of gp130 is ubiquitous, while that of IL-6 R is predominantly restricted to hepatocytes, leukocytes, and lymphocytes (3). Soluble splice forms of gp130 block trans-signaling from IL-6/IL-6 R but not from other cytokines that utilize gp130 as a coreceptor (4, 13).

## References:

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