

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-37/IL-1F7 in ELISAs.
Source	Monoclonal Mouse IgG _{2B} Clone # 899826
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	<i>E. coli</i> -derived recombinant human IL-37/IL-1F7 Lys53-Val206 Accession # Q9NZH6
Conjugate	Alexa Fluor 750 Excitation Wavelength: 749 nm Emission Wavelength: 775 nm
Formulation	Supplied 0.2 mg/mL 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
Intracellular Staining by Flow Cytometry	0.25-1 µg/10 ⁶ cells	Human peripheral blood mononuclear cell (PBMC) monocytes treated with LPS and monensin fixed with Flow Cytometry Fixation Buffer (Catalog # FC004) and permeabilized with Flow Cytometry Permeabilization/Wash Buffer I (Catalog # FC005)

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. ● 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Human Interleukin 1 Family Member 7 (IL-1F7), also named IL-37, FIL-1Z, IL-1H4, and IL-1RP1, belongs to the IL-1 cytokine family. With the exception of IL-18 that maps to human chromosome 11, all other IL-1 family members map to the same cluster on human chromosome 2. Five alternatively spliced transcripts that arise through alternate exon usage have been described. These transcripts encode five different IL-1F7 isoforms (IL-1F7a through e also referred to as isoforms 1 through 5) that have distinct expression profiles. Polymorphism in the protein sequence of IL-1F7 isoforms also exists. Like IL-1α, IL-1β and IL-18, all of the IL-1F7 variants lack a typical signal peptide. The longest IL-1F7 transcript, referred to as IL-1F7b or IL-1F7 isoform 1, encodes a 218 amino acid (aa) residues proprotein containing a 45 aa propeptide, which is removed by caspase-1 to generate the 173 aa mature segment. Mature IL-1F7b and other IL-1F7 variants lack potential N-linked glycosylation sites. IL-1F7 shares approximately 21%, 24%, and 30% aa sequence identity with mature IL-1α, IL-1β and IL-1ra, respectively. Mouse IL-1F7 has not been reported, but human IL-1F7 is active on mouse cells. IL-1F7b binds to IL-18 Rα with low affinity but does not exert any IL-18 agonistic or antagonistic effects. IL-1F7b also binds to the IL-18BP to enhance the antagonistic effects of IL-18BP. It has been proposed that IL-1F7b form a trimeric complex with IL-18BP and IL-18 Rβ. This complex blocks IL-18 activity by sequestering the signal transducing subunit and preventing it from participating in IL-18 signaling (1-8).

References:

1. Smith, D.E. *et al.* (2000) J. Biol. Chem. **275**:1169.
2. Kumar S. *et al.* (2000) J. Biol. Chem. **275**:10308.
3. Busfield S.J. *et al.* (2000) Genomics **66**:213.
4. Kumar S. *et al.* (2002) Cytokine **18**:61.
5. Bufler, P. *et al.* (2002) Proc. Natl. Acad. Sci. USA **99**:13723.
6. Gao, W. *et al.* (2003) J. Immunol. **170**:1077.
7. Pan, G. *et al.* (2001) Cytokine **13**:1.
8. Sims, J.E. *et al.* (2001) Trends Immunol. **22**:533.

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc., and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.