

# IL-1 beta (Pro-form) Monoclonal Antibody (NJTEN3), PerCP-eFluor 710, eBioscience™

Product Details	
Size	100 µg
Species Reactivity	Mouse
Published Species	Human
Host/Isotype	Rat / IgG1, kappa
Recommended Isotype Control	Rat IgG1 kappa Isotype Control (eBRG1), PerCP-eFluor 710, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	NJTEN3
Conjugate	PerCP-eFluor™ 710
Form	Liquid
Concentration	0.2 mg/mL
Purification	Affinity chromatography
Storage buffer	PBS, pH 7.2, with 0.1% gelatin
Contains	0.09% sodium azide
Storage conditions	4° C, store in dark, DO NOT FREEZE!
RRID	AB_2573835

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	0.25 µg/test	9 Publications

## Product Specific Information

Description: This NJTEN3 monoclonal antibody reacts with the pro-form of mouse IL-1 beta, which is a proinflammatory cytokine expressed by monocytes, macrophages, and dendritic cells. It is synthesized in response to inflammatory stimuli as a 31 kDa inactive pro-form that accumulates in the cytosol. Cleavage of pro-IL-1 beta into the active 17 kDa protein requires the activation of inflammasomes, which are multi-protein complexes that respond to pathogens, stress conditions, and other danger signals. Inflammasome activation triggers the processing of the caspase-1 precursor into its active form, which in turn cleaves pro-IL-1 beta. IL-1 beta lacks a signal sequence peptide for classical ER/Golgi pathway and is instead secreted alongside caspase-1 via an alternate and incompletely understood mechanism. IL-1 beta signals via the IL-1RI, which is shared with IL-1 alpha. These cytokines play important roles in innate host defense by triggering the production of other proinflammatory cytokines in target cells and initiating acute-phase responses. Their activity can be moderated by IL-1 Receptor Antagonist (IL-1RA), a protein produced by many cell types that blocks receptor binding through competitive inhibition. Elevated levels of IL-1 beta have been associated with many chronic inflammatory conditions, giving IL-1RA or IL-1 beta neutralizing antibodies potential therapeutical value. The NJTEN3 antibody recognizes only the pro-form of mouse IL-1 beta and does not see the active (cleaved) form.

Applications Reported: This NJTEN3 antibody has been reported for use in intracellular staining followed by flow cytometric analysis.

Applications Tested: This NJTEN3 antibody has been tested by intracellular staining and flow cytometric analysis of stimulated

mouse thioglycolate-elicited peritoneal macrophages using the Intracellular Fixation & Permeabilization Buffer Set (cat. 88-8824) and protocol. Please refer to Best Protocols: Protocol A: Two step protocol for (cytoplasmic) intracellular proteins. This can be used at less than or equal to 0.25 µg per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10<sup>5</sup> to 10<sup>8</sup> cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

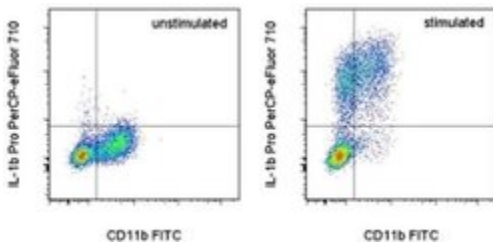
PerCP-eFluor® 710 emits at 710 nm and is excited with the blue laser (488 nm); it can be used in place of PerCP-Cyanine5.5. We recommend using a 710/50 bandpass filter, however, the 695/40 bandpass filter is an acceptable alternative. Please make sure that your instrument is capable of detecting this fluorochrome.

Fixation: Samples can be stored in IC Fixation Buffer (cat. 00-8222) (100 µL of cell sample + 100 µL of IC Fixation Buffer) or 1-step Fix/Lyse Solution (cat. 00-5333) for up to 3 days in the dark at 4°C with minimal impact on brightness and FRET efficiency /compensation. Some generalizations regarding fluorophore performance after fixation can be made, but clone specific performance should be determined empirically.

Excitation: 488 nm; Emission: 710 nm; Laser: Blue Laser.

Filtration: 0.2 µm post-manufacturing filtered.

### Product Images For IL-1 beta (Pro-form) Monoclonal Antibody (NJTEN3), PerCP-eFluor 710, eBioscience™



#### IL-1 beta (Pro-form) Antibody (46-7114-82) in Flow

Mouse thioglycolate-elicited peritoneal macrophages were unstimulated (left) or stimulated for 5 hours with LPS (right) in the presence of Protein Transport Inhibitor Cocktail (Product # 00-4980-03). Cells were then fixed and permeabilized with the Intracellular Fixation & Permeabilization Buffer Set (88-8824) then intracellularly stained with h Anti-Mouse CD11b FITC (Product # 11-0112-41) and 0.125 µg of Anti-Mouse IL-1 beta Pro-form PerCP-eFluor® 710. Total viable cells, as determined by Fixable Viability Dye eFluor® 450, were used for analysis.

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## Flow Cytometry (9)

Cellular and molecular gastroenterology and hepatology

### Interleukin-1 Suppresses Gastrin via Primary Cilia and Induces Antral Hyperplasia.

"Published figure using IL-1 beta (Pro-form) monoclonal antibody (Product # 46-7114-82) in Flow Cytometry"

Authors: Ding L,Sontz EA,Saqui-Salces M,Merchant JL

**Species**  
Not Applicable

**Dilution**  
Not Cited

**Year**  
2021

Journal of neuroinflammation

### Hippocampal interleukin-33 mediates neuroinflammation-induced cognitive impairments.

"Published figure using IL-1 beta (Pro-form) monoclonal antibody (Product # 46-7114-82) in Flow Cytometry"

Authors: Reverchon F,de Concini V,Larrigaldie V,Benmerzoug S,Briault S,Togbé D,Ryffel B,Quesniaux VFJ,Menuet A

**Species**  
Not Applicable

**Dilution**  
Not Cited

**Year**  
2020

[View more Flow references on thermofisher.com](#)

## More applications with references on thermofisher.com

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