

IL-1 beta (Pro-form) Monoclonal Antibody (NJTEN3), eFluor 450, eBioscience™

Product Details	
Size	100 µg
Species	Mouse
Published Species	Artificial Control, Human
Expression System	Rat / IgG1, kappa
Recommended Isotype Control	Rat IgG1 kappa Isotype Control (eBRG1), eFluor 450, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	NJTEN3
Conjugate	eFluor® 450
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_2574109

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	0.5 µg/test	7 Publications
ELISA (ELISA)	-	1 Publication

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 intracellular staining followed by flow cytometric analysis.

Applications Tested: This NJTEN3 antibody has been tested by intracellular staining of stimulated mouse thioglycolate-elicited

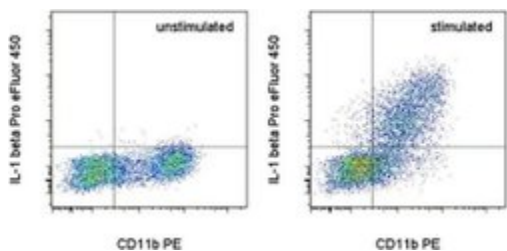
peritoneal macrophages using the Intracellular Fixation and Permeabilization Buffer Set (cat. 88-8824) and protocol. Please refer to Best Protocols: Protocol A: Two step protocol for (cytoplasmic) intracellular proteins. This can be used at less than or equal to 0.5 µg per test. A test is defined as 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 10⁵ to 10⁸ cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

eFluor® 450 is an alternative to Pacific Blue®. eFluor® 450 emits at 445 nm and is excited with the Violet laser (405 nm). Please make sure that your instrument is capable of detecting this fluorochoime.

Excitation: 405 nm; Emission: 445 nm; Laser: Violet Laser.

Filtration: 0.2 µm post-manufacturing filtered.

Product Images For IL-1 beta (Pro-form) Monoclonal Antibody (NJTEN3), eFluor 450, eBioscience™



IL-1 beta (Pro-form) Antibody (48-7114-82) 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 and Permeabilization Buffer Set (88-8824) then intracellularly stained with Anti-Mouse CD11b PE (Product # 12-0112-82) and 0.25 µg of Anti-Mouse IL-1 beta Pro-form eFluor® 450. Total viable cells were used for analysis.

[View more figures on thermofisher.com](https://www.thermofisher.com)

8 References

Flow Cytometry (7)

Frontiers in immunology

Notch Regulates Macrophage-Mediated Inflammation in Diabetic Wound Healing.

"Published figure using IL-1 beta (Pro-form) monoclonal antibody (Product # 48-7114-82) in Flow Cytometry"

Authors: Kimball AS, Joshi AD, Boniakowski AE, Schaller M, Chung J, Allen R, Bermick J, Carson WF, Henke PK, Maillard I, Kunkel SL, Gallagher KA

Species
Human

Dilution
Not Cited

Year
2019

JCI insight

1,25-Dihydroxyvitamin D suppresses M1 macrophages and promotes M2 differentiation at bone injury sites.

"Published figure using IL-1 beta (Pro-form) monoclonal antibody (Product # 48-7114-82) in Flow Cytometry"

Authors: Wasnik S, Rundle CH, Baylink DJ, Yazdi MS, Carreon EE, Xu Y, Qin X, Lau KW, Tang X

Species
Artificial Control

Dilution
Not Cited

Year
2018

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

ELISA (1)

Cancer discovery

Cell-selective inhibition of NF-B signaling improves therapeutic index in a melanoma chemotherapy model.

"Published figure using IL-1 beta (Pro-form) monoclonal antibody (Product # 48-7114-82) in ELISA"

Authors: Enzler T, Sano Y, Choo MK, Cottam HB, Karin M, Tsao H, Park JM

Species
Not Applicable

Dilution
Not Cited

Year
2011

More applications with references on thermofisher.com

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