

# IL-1 beta (Pro-form) Monoclonal Antibody (NJTEN3), FITC, eBioscience™

Product Details	
Size	100 µg
Species	Mouse
Published Species	Artificial Control, Human, Mouse
Expression System	Rat / IgG1, kappa
Recommended Isotype Control	Rat IgG1 kappa Isotype Control (eBRG1), FITC, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	NJTEN3
Conjugate	FITC
Form	Liquid
Concentration	0.5 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_10718251

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	0.25 µg/test	9 Publications
ELISA (ELISA)	-	1 Publication
Western Blot (WB)	-	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.

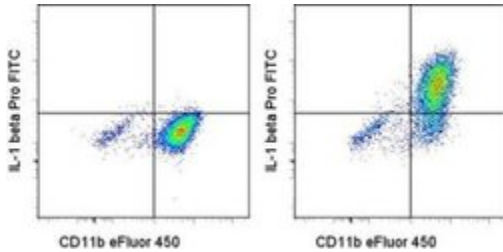
Applications Reported: This NJTEN3 antibody has been reported for use in intracellular staining and flow cytometric analysis.

Applications Tested: This NJTEN3 antibody has been tested by intracellular staining and flow cytometric analysis of 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 0.25 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.

Excitation: 488 nm; Emission: 520 nm; Laser: Blue Laser.

Filtration: 0.2 µm post-manufacturing filtered.

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



#### IL-1 beta (Pro-form) Antibody (11-7114-82) in Flow

Intracellular staining of BALB/c thioglycolate-elicited peritoneal macrophages unstimulated (left) or stimulated 6 hours with LPS (right) in the presence of Protein Transport Inhibitor Cocktail (Product # 00-4980-03) with Anti-Mouse CD11b eFluor® 450 (Product # 48-0112-82) and 0.125 µg of Anti-Mouse IL-1 beta Pro-form FITC. Total viable cells were used for analysis.

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

## 11 References

### Flow Cytometry (9)

Frontiers in immunology

#### Notch Regulates Macrophage-Mediated Inflammation in Diabetic Wound Healing.

"Published figure using IL-1 beta (Pro-form) monoclonal antibody (Product # 11-7114-82) 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

Frontiers in immunology

#### The G2A Receptor Controls Polarization of Macrophage by Determining Their Localization Within the Inflamed Tissue.

"11-7114 was used in Flow cytometry/Cell sorting to study the role of the G-protein coupled receptor, G2A, in chemotactic migration and polarisation of macrophages, using the zymosan-model of acute inflammation."

Authors: Kern K, Schäfer SMG, Cohnen J, Pierre S, Osthues T, Tarighi N, Hohmann S, Ferreiros N, Brüne B, Weigert A, Geisslinger G, Sisignano M, Scholich K

**Species**  
Mouse

**Dilution**  
Not Cited

**Year**  
2019

[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 # 11-7114-82) 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

### Western Blot (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 # 11-7114-82) 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

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