IL-1 beta (Pro-form) Monoclonal Antibody (NJTEN3), PE, 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), PE, eBioscience™
Class	Monoclonal
Type	Antibody
Clone	NJTEN3
Conjugate	PE
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_10732630

Applications	Tested Dilution	Publications
Flow Cytometry (Flow)	0.06 µg/test	14 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-RA 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.

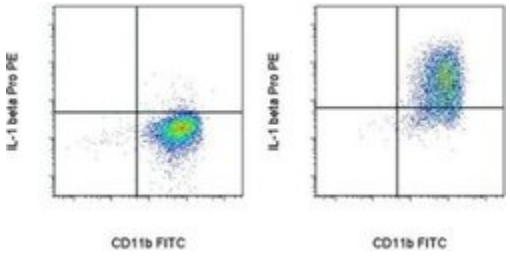
Applications Tested: This NJTEN3 antibody has been tested by intracellular staining and flow cytometric analysis of mouse thioglycolate-elicited peritoneal macrophages using the Intracellular Fixation and Permeabilization Buffer Set (cat. 88-8824) and

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 0.06 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 10^5 to 10^8 cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

Excitation: 488-561 nm; Emission: 578 nm; Laser: Blue Laser, Green Laser, Yellow-Green Laser.

Filtration: 0.2 µm post-manufacturing filtered.

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



IL-1 beta (Pro-form) Antibody (12-7114-82) in Flow
In vitro-cultured mouse monocytes unstimulated (left) or stimulated with LPS (right), in the presence of Protein Transport Inhibitor Cocktail (Product # 00-4980-03), stained with Anti-Mouse CD11b FITC (Product # 11-0112-41) and 0.03 µg of Anti-Mouse IL-1 beta Pro-form PE. Total viable cells were used for analysis.

View more figures on thermofisher.com

14 References

Flow Cytometry (14)

Frontiers in immunology

Notch Regulates Macrophage-Mediated Inflammation in Diabetic Wound Healing.

"Published figure using IL-1 beta (Pro-form) monoclonal antibody (Product # 12-7114-82) 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.

"12-7114 was used in Flow cytometry/Cell sorting to define the role of M1 macrophages at bone injury sites via the function of 1,25-Dihydroxyvitamin D in suppressing M1 but promoting M2 differentiation."

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

Species
Mouse
Artificial Control

Dilution
Not Cited
Not Cited

Year
2018

View more Flow references on thermofisher.com

More applications with references on thermofisher.com