

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

Product Details	
Size	100 µg
Species Reactivity	Mouse
Published Species	Mouse, Human
Host/Isotype	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	17 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 and flow cytometric analysis.

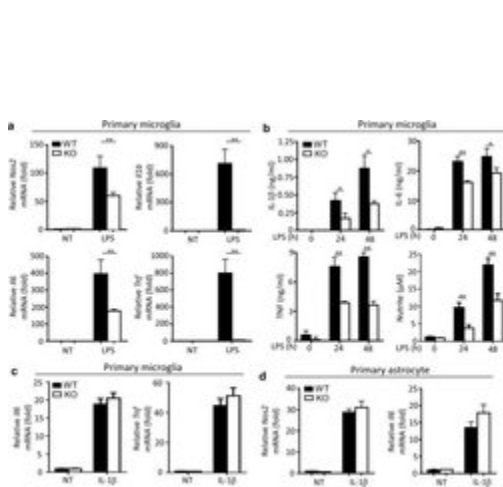
Applications Tested: This NJTEN3 antibody has been tested by intracellular staining and flow cytometric analysis of mouse thioglycolate-elicited peritoneal macrophages using the Intracellular Fixation & Permeabilization Buffer Set (cat. 88-8824) and

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 10⁵ to 10⁸ 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.

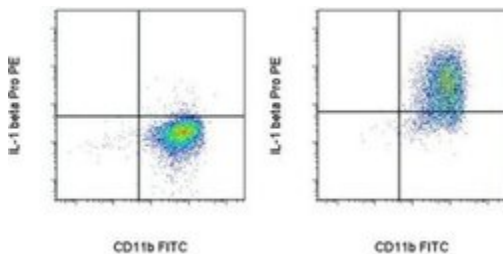
Advanced Verification Data



IL-1 beta (Pro-form) Antibody (12-7114-82)

Figure 3 Open in a separate window Local s.c. treatment with 1,25(OH)₂D at the proinflammatory stage suppressed M1 macrophage differentiation but augmented M2 macrophage differentiation at fracture sites. (A) B6 mice received femoral fracture surgery (Fx). Immediately after the fracture surgery, the animals received one of the following daily s.c. treatments (Tx) at fracture sites: a) vehicle control (VC), b) 100 ng/kg/mouse 1,25(OH)₂D (VD), or c) 1,000 ng/kg/mouse 1,25(OH)₂D (VD). Additionally, a group of normal healthy mice was included as a control (intact bones). At days 1, 4, and 7 after the treatments, intact and fractured bones were collected, and cells were isolated as described in Methods. The cells were then analyzed by FACS. (B) Gating strategy shows that the cells are gated on viable CD11b⁺/F4/80⁺ macrophages for the FACS analysis. (C) Representative FACS plots show the expression of IL-1β (left panel) and IL-12 (right panel) in CD11b⁺ + F4/80⁺ macrophages at day 1 after the treatments. (D) Cumulative data of the mean fluorescent intensities (MFIs) of IL-1β (upper panels) and IL-12 (lower panels) expressions in CD11b⁺ + F4/80⁺ macrophages at day 1. (E) Cumulative data of the percent of IL-1β^{hi} and IL-12^{hi} cells among CD11b⁺ + F4/80⁺ macrophages at day 1. * P < 0.05, ** P < 0.01, *** P < 0.001, **** P < 0.0001, ANOVA test, n = 3. (F) B6 mice were subjected to fracture surgery and, immediately after the fracture surgery, received a Cell treatment validation info.

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

Flow Cytometry (17)

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 # 12-7114-82) 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.

"12-7114 was used in Flow cytometry/Cell sorting to investigate the role of Interleukin (IL)-33 in immunoregulatory mechanisms in the brain."

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

Species
Mouse
Not Applicable

Dilution
1:20
Not Cited

Year
2020

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

More applications with references on thermofisher.com

For Research Use Only. Not for use in diagnostic procedures. Not for resale without express authorization. Products are warranted to operate or perform substantially in conformance with published Product specifications in effect at the time of sale, as set forth in the Production documentation, specifications and/or accompanying package inserts ("Documentation"). No claim of suitability for use in applications regulated by FDA is made. The warranty provided herein is valid only when used by properly trained individuals. Unless otherwise stated in the Documentation, this warranty is limited to one year from date of shipment when the Product is subjected to normal, proper and intended usage. This warranty does not extend to anyone other than the Buyer. Any model or sample furnished to Buyer is merely illustrative of the general type and quality of goods and does not represent that any Product will conform to such model or sample. NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GRANTED INCLUDING WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR NON-INFRINGEMENT. BUYER'S EXCLUSIVE REMEDY FOR NON-CONFORMING PRODUCTS DURING THE WARRANTY PERIOD IS LIMITED TO REPAIR, REPLACEMENT OF OR REFUND FOR THE NON-CONFORMING PRODUCT(S) AT SELLER'S SOLE OPTION. THERE IS NO OBLIGATION TO REPAIR, REPLACE OR REFUND FOR PRODUCTS AS THE RESULT OF (I) ACCIDENT, DISASTER OR EVENT OF FORCE MAJEURE, (II) MISUSE, FAULT OR NEGLIGENCE OF OR BY BUYER, (III) USE OF THE PRODUCTS IN A MANNER FOR WHICH THEY WERE NOT DESIGNED, OR (IV) IMPROPER STORAGE AND HANDLING OF THE PRODUCTS. Unless otherwise expressly stated on the Product or in the documentation accompanying the Product, the Product is intended for research only and is not to be used for any other purpose, including without limitation, unauthorized commercial uses, in vitro diagnostic uses, ex vivo or in vivo therapeutic uses, or any type of consumption by or application to human or animals.