

# IL-1 $\beta$ (D3U3E) Rabbit mAb

✓ 100  $\mu$ l  
(10 western blots)



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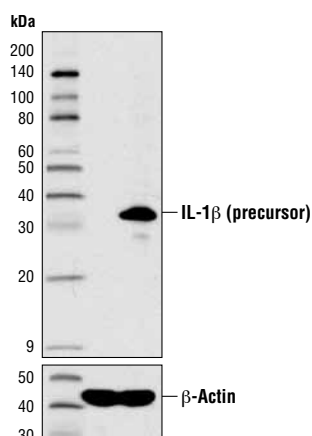
**Entrez Gene ID** #3553  
**UniProt ID** #P01584

Applications W, IF-IC, F Endogenous	Species Cross-Reactivity* H	Molecular Wt. 17, 31 kDa	Isotype Rabbit IgG**
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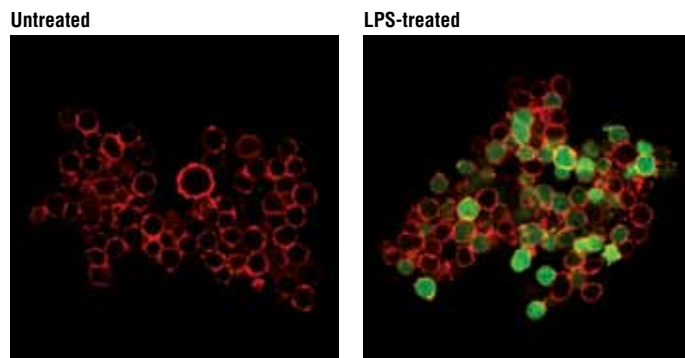
**Background:** Interleukin-1 $\beta$  (IL-1 $\beta$ ), one of the major caspase-1 targets, is a multifunctional cytokine that is involved in a host of immune and proinflammatory responses (1). It is produced primarily by activated monocytes and macrophages. It signals through various adaptor proteins and kinases that lead to activation of numerous downstream targets (2-6). Human IL-1 $\beta$  is synthesized as a 31 kDa precursor. To gain activity, the precursor must be cleaved by caspase-1 between Asp116 and Ala117 to yield a 17 kDa mature form (7,8). Detection of the 17 kDa mature form of IL-1 $\beta$  is a good indicator of caspase-1 activity.

**Specificity/Sensitivity:** IL-1 $\beta$  (D3U3E) Rabbit mAb recognizes endogenous levels of total IL-1 $\beta$  protein. This antibody is not observed to detect endogenous levels of mature IL-1 $\beta$ . It can detect up to 100 pg of recombinant mature IL-1 $\beta$ .

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with recombinant human IL-1 $\beta$  protein.



Western blot analysis of extracts from THP-1 cells, untreated (-) or LPS-treated (100 ng/ml, 3 hr; +), using IL-1 $\beta$  (D3U3E) Rabbit mAb (upper) and  $\beta$ -Actin (D6A8) Rabbit mAb #8457 (lower).



Confocal immunofluorescent analysis of THP-1 cells, untreated (left) or treated with LPS-treated (500 ng/ml, 2 hr; right), using IL-1 $\beta$  (D3U3E) Rabbit mAb (green). Actin filaments were labeled with DyLight™ 554 Phalloidin #13054 (red).

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100  $\mu$ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**\*Species cross-reactivity is determined by western blot.**

**\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.**

## Recommended Antibody Dilutions:

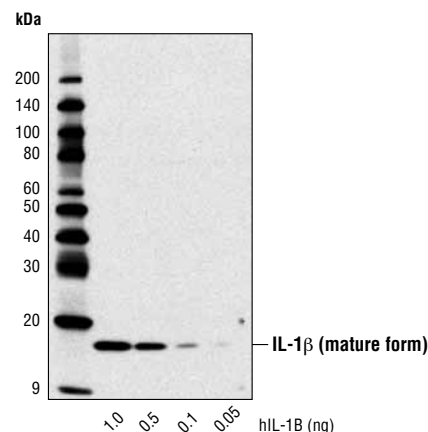
Western blotting	1:1000
Immunofluorescence (IF-IC)	1:400
Flow Cytometry	1:200

**For product specific protocols please see the web page for this product at [www.cellsignaling.com](http://www.cellsignaling.com).**

**Please visit [www.cellsignaling.com](http://www.cellsignaling.com) for a complete listing of recommended companion products.**

## Background References:

- (1) Dinarello, C.A. (1998) *Int. Rev. Immunol.* 16, 457-499.
- (2) Burns, K. et al. (1998) *J. Biol. Chem.* 273, 12203-12209.
- (3) Cao, Z. et al. (1996) *Nature* 383, 443-446.
- (4) Cao, Z. et al. (1996) *Science* 271, 1128-1131.
- (5) Wesche, H. et al. (1997) *Immunity* 7, 837-847.
- (6) Ninomiya-Tsuji, J. et al. (1999) *Nature* 398, 252-256.
- (7) Thornberry, N. A. et al. (1992) *Nature* 356, 768-774.
- (8) Cerretti, D. P. et al. (1992) *Science* 256, 97-100.

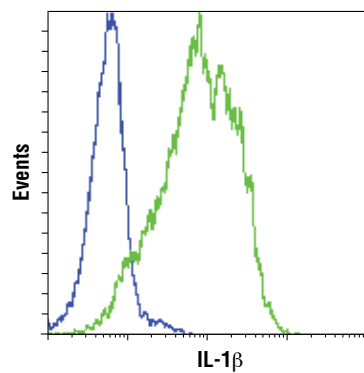


Western blot analysis of recombinant Human Interleukin-1 $\beta$  (hIL-1 $\beta$ ) #8900 using IL-1 $\beta$  (D3U3E) Rabbit mAb.

**IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween®20 at 4°C with gentle shaking, overnight.**

**Applications Key:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence  
**Species Cross-Reactivity Key:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine  
Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.

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Flow cytometric analysis of THP-1 cells, untreated (blue) or treated with LPS (100 ng/mL, 3 hr; green), using IL-1 $\beta$  (D3U3E) Rabbit mAb. Anti-rabbit IgG (H+L), F(ab')<sub>2</sub> Fragment (Alexa Fluor® 647 Conjugate) #4414 was used as a secondary antibody.