# Anti-IL-1 beta Antibody [JJ087-3]

## ET1701-39

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|---|---|
| **Product Type:** | Recombinant Rabbit monoclonal IgG, primary antibodies |
| **Species reactivity:** | Human |
| **Applications:** | WB, IF-Cell, IF-Tissue, IHC-P, FC |
| **Molecular Wt:** | Predicted band size: 31 kDa |
| **Clone number:** | JJ087-3 |

**Description:** Two forms of interleukin-1, designated IL-1α and IL-1β, have been described. Although encoded by distinct genes and exhibiting roughly only 25% sequence identity, IL-1α and IL-1β bind to the same receptor and seem to elicit similar biological responses. IL-1 production is generally thought to be associated with inflammation, but it has also been shown to be expressed during kidney development, thymocyte differentiation and cartilage degradation. IL-1 plays a critical role in the regulation of immune response and inflammation, acting as an activator of T and B lymphocytes and natural killer (NK) cells. In T cells, IL-1 stimulates the production of IL-2 and selectively inhibits IL-4 expression. IL-1 induces B cell proliferation and maturation, and immunoglobulin synthesis. NK cells require IL-1β for production of the anti- pathogen IFN-γ. IL-1 has also been implicated in several pathological conditions including rheumatoid arthritis, inflammatory bowel disease and atherosclerosis.

**Immunogen:** Synthetic peptide within C-terminal human IL1 beta.

**Positive control:** THP-1 treated with 80nM TPA overnight then treated with 100ng/mL LPS for 6 hours and 300ng/mL BFA for 3 hours whole cell lysate, A431, Hela, human kidney tissue.

**Subcellular location:** Cytoplasm, Lysosome, extracellular exosome, Secreted.

**Database links:** SwissProt: P01584 Human

**Recommended Dilutions:**

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| **WB** | 1:1,000 |
| **IF-Cell** | 1:50-1:200 |
| **IF-Tissue** | 1:50-1:200 |
| **IHC-P** | 1:50-1:200 |
| **FC** | 1:50-1:100 |

**Storage Buffer:** 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

**Storage Instruction:** Store at +4℃ after thawing. Aliquot store at -20℃ or -80℃. Avoid repeated freeze / thaw cycles.

**Purity:** Protein A affinity purified.

## Images

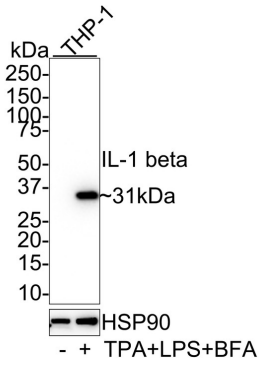


**Fig1:** Western blot analysis of IL-1 beta on different lysates with Rabbit anti-IL-1 beta antibody (ET1701-39) at 1/1,000 dilution.

Lane 1: THP-1 whole cell lysate
Lane 2: THP-1 treated with 80nM TPA overnight then treated with 100ng/mL LPS for 6 hours and 300ng/mL BFA for 3 hours whole cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 31 kDa
Observed band size: 31 kDa

Exposure time: 25 seconds;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1701-39) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

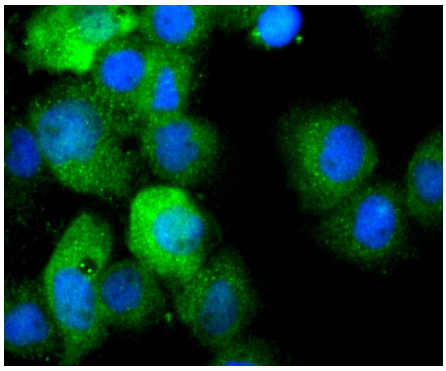

**Fig2:** ICC staining of IL-1 beta in A431 cells (green). Formalin fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 10 minutes at room temperature and blocked with 1% Blocker BSA for 15 minutes at room temperature. Cells were probed with the primary antibody (ET1701-39, 1/50) for 1 hour at room temperature, washed with PBS. Alexa Fluor®488 Goat anti-Rabbit IgG was used as the secondary antibody at 1/1,000 dilution. The nuclear counter stain is DAPI (blue).

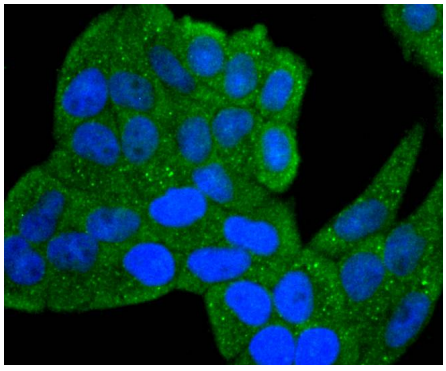

**Fig3:** ICC staining of IL-1 beta in Hela cells (green). Formalin fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 10 minutes at room temperature and blocked with 1% Blocker BSA for 15 minutes at room temperature. Cells were probed with the primary antibody (ET1701-39, 1/50) for 1 hour at room temperature, washed with PBS. Alexa Fluor®488 Goat anti-Rabbit IgG was used as the secondary antibody at 1/1,000 dilution. The nuclear counter stain is DAPI (blue).

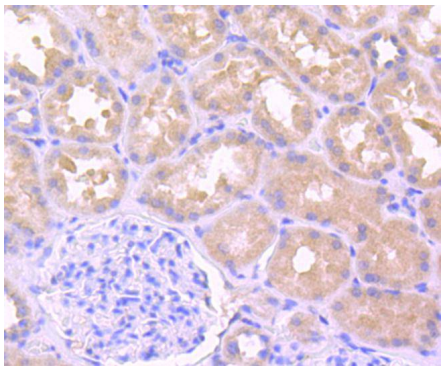

**Fig4:** Immunohistochemical analysis of paraffin-embedded human kidney tissue using anti-IL-1 beta antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 8.0-8.4) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with dd$H_2O$ and PBS, and then probed with the primary antibody (ET1701-39, 1/50) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

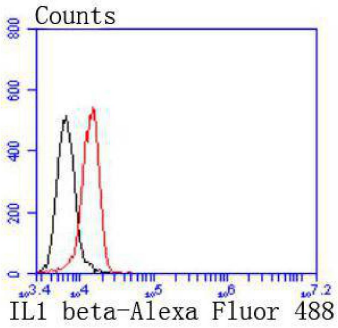


**Fig5:** Flow cytometric analysis of IL-1 beta was done on Hela cells. The cells were fixed, permeabilized and stained with the primary antibody (ET1701-39, 1/50) (red). After incubation of the primary antibody at room temperature for an hour, the cells were stained with a Alexa Fluor 488-conjugated Goat anti-Rabbit IgG Secondary antibody at 1/1000 dilution for 30 minutes.Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

**Note:** All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

## Background References

1. Ashok A et al. Exposure to As-, Cd-, and Pb-mixture induces A , amyloidogenic APP processing and cognitive impairments via oxidative stress-dependent neuroinflammation in young rats. Toxicol Sci 143:64-80 (2015).
2. Zhang J et al. Effects of p75 neurotrophin receptor on regulating hypoxia-induced angiogenic factors in retinal pigment epithelial cells. Mol Cell Biochem 398:123-34 (2015).