

IL-1 α (D4F3S) Rabbit mAb

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Applications: W, IP, FC-FP	Reactivity: M	Sensitivity: Endogenous	MW (kDa): 30	Source/Isotype: Rabbit IgG	UniProt ID: #P01582	Entrez-Gene Id: 16175
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Product Usage Information**Application**

Western Blotting
Immunoprecipitation
Flow Cytometry (Fixed/Permeabilized)

Dilution

1:1000
1:200
1:200

Storage

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

Specificity/Sensitivity

IL-1 α (D4F3S) Rabbit mAb recognizes endogenous levels of total IL-1 α protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant protein specific to the carboxy terminus of mouse IL-1 α protein.

Background

Interleukin 1 alpha (IL-1 α) belongs to the IL-1 family of cytokines with 11 members including IL-1 β . IL-1 α is expressed in many cell types of both hematopoietic and non-hematopoietic origins under steady state, and its expression can be increased in response to appropriate stimuli (1,2). Like IL-1 β , IL-1 α is also synthesized as a precursor (pro-IL-1 α) and can be cleaved into smaller mature forms. However, both pro-IL-1 α and the cleaved form of IL-1 α are biologically active and can activate the signaling pathway through the membrane receptor IL-1R1. IL-1 α is active both as a secreted form and as a membrane-bound form. Due to such characteristics, passive leakage of IL-1 α from dying cells can activate inflammation, leading some researchers to consider IL-1 α as a key "alarmin in the cell" that alerts the host to damage or injury (3,4). In addition, IL-1 α can also enter the nucleus to modulate transcription (5,6).

Background References

1. Garlanda, C. et al. (2013) *Immunity* 39, 1003-18.
2. Palomo, J. et al. (2015) *Cytokine* 76, 25-37.
3. Bertheloot, D. and Latz, E. (2017) *Cell Mol Immunol* 14, 43-64.
4. Di Paolo, N.C. and Shayakhmetov, D.M. (2016) *Nat Immunol* 17, 906-13.
5. Lamacchia, C. et al. (2013) *Cytokine* 63, 135-44.
6. Rider, P. et al. (2013) *Semin Immunol* 25, 430-8.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4 $^{\circ}\text{C}$ with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

M: Mouse

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