

#13026
Store at +4C**IFN- γ (D3H2) XP[®] Rabbit mAb
(Alexa Fluor[®] 647 Conjugate)****Orders:** 877-616-CELL (2355)
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For Research Use Only. Not for Use in Diagnostic Procedures.

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| Applications: FC-FP | Reactivity: H | Sensitivity: Endogenous | Source/Isotype: Rabbit IgG | UniProt ID: #P01579 | Entrez-Gene Id: 3458 |
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Product Usage Information**Application**

Flow Cytometry (Fixed/Permeabilized)

Dilution

1:50

Storage

Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.

Specificity/SensitivityIFN- γ (D3H2) XP[®] Rabbit mAb (Alexa Fluor[®] 647 Conjugate) recognizes endogenous levels of total IFN- γ protein.**Source / Purification**Monoclonal antibody is produced by immunizing animals with recombinant human IFN- γ protein.**Description**This Cell Signaling Technology antibody is conjugated to Alexa Fluor[®] 647 fluorescent dye and tested in-house for direct flow cytometry analysis in human cells. This antibody is expected to exhibit the same species cross-reactivity as the unconjugated IFN- γ (D3H2) XP[®] Rabbit mAb #8455.**Background**

IFN- γ plays key roles in both the innate and adaptive immune response. IFN- γ activates the cytotoxic activity of innate immune cells, such as macrophages and NK cells (1,2). IFN- γ production by NK cells and antigen presenting cells (APCs) promotes cell-mediated adaptive immunity by inducing IFN- γ production by T lymphocytes, increasing class I and class II MHC expression, and enhancing peptide antigen presentation (1). Due to differences in the degree of glycosylation, there are three forms of IFN- γ , with approximate molecular weights of 25, 20, and 15.5 kDa by SDS-PAGE (5). The anti-viral activity of IFN- γ is due to its induction of PKR and other regulatory proteins. Binding of IFN- γ to the IFNGR1/IFNGR2 complex promotes dimerization of the receptor complexes to form the (IFNGR1/IFNGR2)₂ -IFN- γ dimer. Binding induces a conformational change in receptor intracellular domains and signaling involves Jak1, Jak2, and Stat1 (3). The critical role of IFN- γ in amplification of immune surveillance and function is supported by increased susceptibility to pathogen infection by IFN- γ or IFNGR knockout mice and in humans with inactivating mutations in *IFNGR1* or *IFNGR2*. IFN- γ also appears to have a role in atherosclerosis (4).

Background References

- Schroder, K. et al. (2004) *J Leukoc Biol* 75, 163-89.
- Martinez, F.O. et al. (2009) *Annu Rev Immunol* 27, 451-83.
- Kotenko, S.V. et al. (1995) *J Biol Chem* 270, 20915-21.
- McLaren, J.E. and Ramji, D.P. (2009) *Cytokine Growth Factor Rev* 20, 125-35.
- Kelker, H.C. et al. (1984) *J Biol Chem* 259, 4301-4.

Species Reactivity

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

Applications Key**FC-FP:** Flow Cytometry (Fixed/Permeabilized)**Cross-Reactivity Key****H:** Human**Trademarks and Patents**

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