

# IFN- $\gamma$ (D3H2) XP<sup>®</sup> Rabbit mAb (PE Conjugate)

✓ 100  $\mu$ l  
(50 tests)



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**For Research Use Only. Not For Use In Diagnostic Procedures.**

**Entrez Gene ID** #3458  
**UniProt ID** #P01579

| Applications<br>F<br>Endogenous | Species Cross-Reactivity<br>H | Isotype<br>Rabbit IgG |
|---------------------------------|-------------------------------|-----------------------|
|---------------------------------|-------------------------------|-----------------------|

**Description:** This Cell Signaling Technology antibody is conjugated to phycoerythrin (PE) and tested in-house for direct flow cytometry analysis in human cells. The antibody is expected to exhibit the same species cross-reactivity as the unconjugated IFN- $\gamma$  (D3H2) XP<sup>®</sup> Rabbit mAb #8455.

**Background:** IFN- $\gamma$  plays key roles in both the innate and adaptive immune response. IFN- $\gamma$  activates the cytotoxic activity of innate immune cells, such as macrophages and NK cells (1,2). IFN- $\gamma$  production by NK cells and antigen presenting cells (APCs) promotes the cell mediated adaptive immunity by inducing IFN- $\gamma$  production by T lymphocytes, increasing class I and class II MHC expression, and enhancing peptide antigen presentation (1). The anti-viral activity of IFN- $\gamma$  is due to its induction of PKR and other regulatory proteins. Binding of IFN- $\gamma$  to the IFNGR1/IFNGR2 complex promotes dimerization of the receptor complexes to form the (IFNGR1/IFNGR2)<sub>2</sub>-IFN- $\gamma$  dimer. Binding induces a conformational change in receptor intracellular domains and signaling involves Jak1, Jak2, and Stat1 (3). The critical role of IFN- $\gamma$  in amplification of immune surveillance and function is supported by increased susceptibility to pathogen infection by IFN- $\gamma$  or IFNGR knockout mice and in humans with inactivating mutations in IFNGR1 or IFNGR2. IFN- $\gamma$  also appears to have a role in atherosclerosis (4).

**Specificity/Sensitivity:** IFN- $\gamma$  (D3H2) XP<sup>®</sup> Rabbit mAb (PE Conjugate) recognizes endogenous levels of total IFN- $\gamma$  protein.

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

## Background References:

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

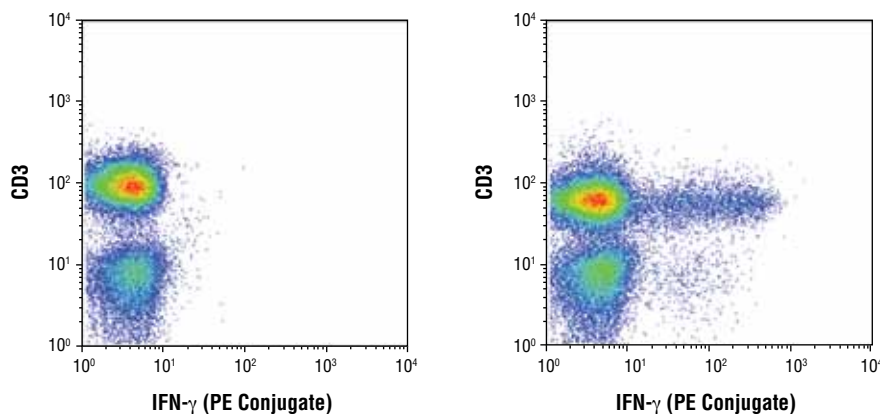
**Storage:** Supplied in PBS (pH 7.2), less than 0.1% sodium azide and 2 mg/ml BSA. Store at 4°C. *Do not aliquot the antibodies. Protect from light. Do not freeze.*

## Recommended Antibody Dilutions:

Flow Cytometry 1:50

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

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Flow cytometric analysis of human peripheral blood cells, untreated (left) or treated (right) with TPA #4174 (40 nM, 4 hr), Ionomycin, Calcium Salt #9995 (2  $\mu$ M, 4 hr), and Brefeldin A #9972 (1  $\mu$ g/ml, last 3 hr of stimulation), using a CD3 antibody and IFN- $\gamma$  (D3H2) XP<sup>®</sup> Rabbit mAb (PE Conjugate). Analysis was performed on cells in the lymphocyte gate