

Store at  
4°C

# IFN- $\gamma$ (XMG1.2) Rat mAb (APC Conjugate)

#32793

Cell Signaling  
TECHNOLOGY®Support: +1-978-867-2388 (U.S.)  
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orders@cellsignal.comEntrez-Gene ID #15978  
UniProt ID #P01580

New 05/19

**For Research Use Only. Not For Use In Diagnostic Procedures.****Applications**  
F  
Endogenous**Species Cross-Reactivity**  
M**Isotype**  
Rat IgG1

**Description:** This Cell Signaling Technology antibody is conjugated to APC and tested in-house for direct flow cytometric analysis in mouse cells.

**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 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- $\gamma$  (XMG1.2) Rat mAb (APC Conjugate) recognizes endogenous levels of total IFN- $\gamma$  protein. This antibody detects an epitope within the intracellular domain.

**Source/Purification:** This monoclonal antibody was purified from tissue culture supernatant via affinity chromatography. The purified antibody was conjugated under optimal conditions, with unreacted dye removed from the preparation.

**Storage:** Supplied in 10 mM NaH<sub>2</sub>PO<sub>4</sub>, 150 mM NaCl, 0.09% Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, 0.1% gelatin, pH 7.2. This product is stable for 6 months when stored at 4°C. *Do not aliquot the antibody. Protect from light. Do not freeze.*

**Recommended Antibody Dilutions:**

Flow Cytometry 1:300

**For product specific protocols and a complete listing of recommended companion products please see the product web page at [www.cellsignal.com](http://www.cellsignal.com).**

**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.

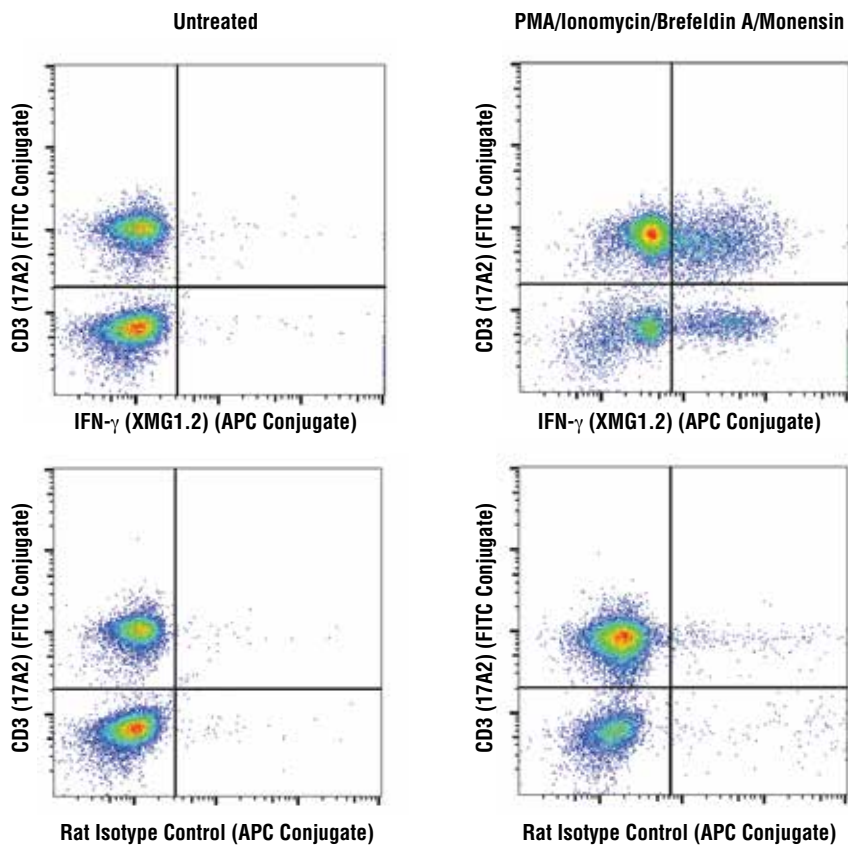
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**Applications:** W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide **Species Cross-Reactivity:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink 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.



Flow cytometric analysis of live mouse splenocytes, untreated (left column) or treated with 1X Cell Stimulation Cocktail (with protein transport inhibitors) (500X) (right column), using IFN- $\gamma$  (XMG1.2) Rat mAb (APC Conjugate) (top row) or concentration-matched Rat Isotype Control (APC Conjugate) (bottom row), and co-stained with CD3 (17A2) Rat mAb (FITC Conjugate) #86603.

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