

#12942 Store at +4°C

**IFN- γ (D3H2) XP® Rabbit mAb
(Alexa Fluor® 488 Conjugate)****Cell Signaling**
TECHNOLOGY®**Orders:** 877-616-CELL (2355)
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For Research Use Only. Not for Use in Diagnostic Procedures.

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. <i>Do not aliquot the antibody. Protect from light. Do not freeze.</i>	
Specificity / Sensitivity	IFN- γ (D3H2) XP® Rabbit mAb (Alexa Fluor® 488 Conjugate) recognizes endogenous levels of total IFN- γ protein.	
Source / Purification	Monoclonal antibody is produced by immunizing animals with recombinant human IFN- γ protein.	
Product Description	This Cell Signaling Technology antibody is conjugated to Alexa Fluor® 488 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 3 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 <i>IFNGR1</i> or <i>IFNGR2</i> . IFN- γ also appears to have a role in atherosclerosis (4).	
Background References	<ol style="list-style-type: none"> Schroder, K. et al. (2004) <i>J Leukoc Biol</i> 75, 163-89. Martinez, F.O. et al. (2009) <i>Annu Rev Immunol</i> 27, 451-83. Kotenko, S.V. et al. (1995) <i>J Biol Chem</i> 270, 20915-21. McLaren, J.E. and Ramji, D.P. (2009) <i>Cytokine Growth Factor Rev</i> 20, 125-35. Kelker, H.C. et al. (1984) <i>J Biol Chem</i> 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 M: mouse R: rat Hm: hamster Mk: monkey Vir: virus 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 GP: Guinea Pig Rab: rabbit All: all species expected
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