

**#13026** Store at +4°C

# IFN- $\gamma$ (D3H2) XP® Rabbit mAb (Alexa Fluor® 647 Conjugate)


**Cell Signaling**  
TECHNOLOGY®

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<b>Applications:</b> FC-FP	<b>Reactivity:</b> H	<b>Sensitivity:</b> Endogenous	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #P01579	<b>Entrez-Gene Id:</b> 3458
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<b>Product Usage Information</b>	<b>Application</b> Flow Cytometry (Fixed/Permeabilized)	<b>Dilution</b> 1:50
<b>Storage</b>	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.	
<b>Specificity / Sensitivity</b>	IFN- $\gamma$ (D3H2) XP® Rabbit mAb (Alexa Fluor® 647 Conjugate) recognizes endogenous levels of total IFN- $\gamma$ protein.	
<b>Source / Purification</b>	Monoclonal antibody is produced by immunizing animals with recombinant human IFN- $\gamma$ protein.	
<b>Product Description</b>	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- $\gamma$ (D3H2) XP® Rabbit mAb #8455.	
<b>Background</b>	<p>IFN-<math>\gamma</math> plays key roles in both the innate and adaptive immune response. IFN-<math>\gamma</math> activates the cytotoxic activity of innate immune cells, such as macrophages and NK cells (1,2). IFN-<math>\gamma</math> production by NK cells and antigen presenting cells (APCs) promotes cell-mediated adaptive immunity by inducing IFN-<math>\gamma</math> 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-<math>\gamma</math>, with approximate molecular weights of 25, 20, and 15.5 kDa by SDS-PAGE (5). The anti-viral activity of IFN-<math>\gamma</math> is due to its induction of PKR and other regulatory proteins. Binding of IFN-<math>\gamma</math> to the IFNGR1/IFNGR2 complex promotes dimerization of the receptor complexes to form the (IFNGR1/IFNGR2)<sub>2</sub>-IFN-<math>\gamma</math> dimer. Binding induces a conformational change in receptor intracellular domains and signaling involves Jak1, Jak2, and Stat1 (3). The critical role of IFN-<math>\gamma</math> in amplification of immune surveillance and function is supported by increased susceptibility to pathogen infection by IFN-<math>\gamma</math> or IFNGR knockout mice and in humans with inactivating mutations in <i>IFNGR1</i> or <i>IFNGR2</i>. IFN-<math>\gamma</math> also appears to have a role in atherosclerosis (4).</p>	
<b>Background References</b>	<ol style="list-style-type: none"> <li>Schroder, K. et al. (2004) <i>J Leukoc Biol</i> 75, 163-89.</li> <li>Martinez, F.O. et al. (2009) <i>Annu Rev Immunol</i> 27, 451-83.</li> <li>Kotenko, S.V. et al. (1995) <i>J Biol Chem</i> 270, 20915-21.</li> <li>McLaren, J.E. and Ramji, D.P. (2009) <i>Cytokine Growth Factor Rev</i> 20, 125-35.</li> <li>Kelker, H.C. et al. (1984) <i>J Biol Chem</i> 259, 4301-4.</li> </ol>	

<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Applications Key</b>	<b>FC-FP:</b> Flow Cytometry (Fixed/Permeabilized)
<b>Cross-Reactivity Key</b>	<b>H:</b> human <b>M:</b> mouse <b>R:</b> rat <b>Hm:</b> hamster <b>Mk:</b> monkey <b>Vir:</b> virus <b>Mi:</b> mink <b>C:</b> chicken <b>Dm:</b> D. melanogaster <b>X:</b> Xenopus <b>Z:</b> zebrafish <b>B:</b> bovine <b>Dg:</b> dog <b>Pg:</b> pig <b>Sc:</b> S. cerevisiae <b>Ce:</b> C. elegans <b>Hr:</b> horse <b>GP:</b> Guinea Pig <b>Rab:</b> rabbit <b>All:</b> all species expected
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