Revision 3

Store at +4C

#12942

IFN-γ (D3H2) XP® Rabbit mAb (Alexa Fluor® 488 Conjugate)

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355) orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
FC-FP	H	Endogenous	Rabbit IgG	#P01579	3458

Product Usage Information

Application	Dilution
Flow Cytometry (Fixed/Permeabilized)	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/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.

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 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

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.
5. 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

All other trademarks are the property of their respective owners. Visit cellsignal.com/trademarks for more information.

Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.