



**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

Store at -20C  
#3115

## IFN- $\alpha$ (8C21) Mouse mAb

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

<b>Applications:</b> W	<b>Reactivity:</b> H	<b>Sensitivity:</b> Recombinant protein	<b>MW (kDa):</b> 19	<b>Source/Isotype:</b> Mouse IgG1	<b>UniProt ID:</b> #P01562	<b>Entrez-Gene Id:</b> 3439
---------------------------	-------------------------	--	------------------------	--------------------------------------	-------------------------------	--------------------------------

<b>Product Usage Information</b>	<b>Application</b> Western Blotting	<b>Dilution</b> 1:1000
<b>Storage</b>	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 $\mu$ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at $-20^{\circ}\text{C}$ . Do not aliquot the antibody.	
<b>Specificity/Sensitivity</b>	IFN- $\alpha$ (8C21) Mouse mAb detects recombinant human interferon- $\alpha$ protein. This antibody does not cross-react with human interferon- $\beta$ and - $\gamma$ .	
<b>Source / Purification</b>	Monoclonal antibody is produced by immunizing animals with purified natural human interferon- $\alpha$ proteins.	
<b>Background</b>	Interferons (IFNs) appear both locally and systematically early after viral infection and participate in limiting the spread of infection. They also affect cell differentiation, growth, surface antigen expression, and immunoregulation (1). There are three naturally occurring interferons: $\alpha$ , $\beta$ , and $\gamma$ . IFN- $\alpha$ is derived from lymphoblastic tissue and has a number of therapeutic applications in the treatment of various human cancers and diseases of viral origin. Recombinant IFN- $\alpha$ from both natural and synthetic genes binds to a common cell surface receptor and induces antiviral activity in a variety of cell lines. When binding to discrete cell surface receptors on target cells, IFN- $\alpha$ induces rapid changes in Jak/Stat phosphorylation, which initiates the Jak/Stat signaling pathway (2). IFN- $\alpha$ signaling also involves production of DAG without an increased intracellular free calcium concentration and the subsequent activation of calcium-independent isoforms of PKC ( $\beta$ and $\epsilon$ ) (3). All IFN- $\alpha$ signaling pathways lead to final alterations of gene expression, which mediate their pleiotropic biologic activities.	
<b>Background References</b>	<ol style="list-style-type: none"> <li>1. Stiehm, E.R. et al. (1982) <i>Ann Intern Med</i> 96, 80-93.</li> <li>2. Pellegrini, S. et al. (1989) <i>Mol Cell Biol</i> 9, 4605-12.</li> <li>3. Pfeffer, L.M. and Colamonici, O.R. (1991) <i>Pharmacol Ther</i> 52, 149-57.</li> </ol>	
<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).	
<b>Western Blot Buffer</b>	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at $4^{\circ}\text{C}$ with gentle shaking, overnight.	
<b>Applications Key</b>	<b>W:</b> Western Blotting	
<b>Cross-Reactivity Key</b>	<b>H:</b> Human	
<b>Trademarks and Patents</b>	Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.  All other trademarks are the property of their respective owners. Visit <a href="http://cellsignal.com/trademarks">cellsignal.com/trademarks</a> for more information.	
<b>Limited Uses</b>	<p>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.</p> <p>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</p>	

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.