

Product Information



Phosphotyrosine (Ascites) Monoclonal Antibody (Clone 13F9)

Catalog No. 10222

Contents:	This vial contains antibody from clarified ascites containing 0.02% sodium azide.
Host:	Mouse, clone 13F9
Isotype:	IgG _{1κ}
Stability:	≥1 year at -20°C
Applications:	ELISA ¹ and western blot (WB). The recommended starting dilution for ELISA and WB is 1:2,000 to 1:10,000. The optimal working dilutions for other applications should be determined empirically.

Protein phosphorylation is an important post-translational modification that serves many key functions to regulate a protein's activity, localization, and protein-protein interactions. Phosphorylation is catalyzed by various specific protein kinases, which involves removing a phosphate group from ATP and covalently attaching it to a recipient protein that acts as a substrate. Most kinases act on both serine and threonine; others act on tyrosine, and a number (dual specificity kinases) act on all three. Because phosphorylation can occur at multiple sites on any given protein, it can therefore change the function or localization of that protein at any time.² Changing the function of these proteins has been linked to a number of diseases, including cancer, diabetes, heart disease, inflammation, and neurological disorders.³⁻⁵ In particular, the phosphorylation of tyrosine is considered one of the key steps in signal transduction and regulation of enzymatic activity.⁶ Specific antibodies can detect phosphotyrosine and are therefore helpful for facilitating the identification of tyrosine kinase substrates *in vivo*.⁷

References

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2. Goto, H., Kiyono, T., Tomono, Y., *et al.* Complex formation of Plk1 and INCENP required for metaphase-anaphase transition. *Nature Cell Biology* **8**, 180-187 (2005).
3. Blume-Jensen, P. and Hunter, T. Oncogenic kinase signalling. *Nature* **411**, 355-365 (2001).
4. Downward, J. The ins and outs of signalling. *Nature* **411**, 759-762 (2001).
5. Pawson, T. and Saxton, T.M. Signaling networks - Do all roads lead to the same genes? *Cell* **97**, 675-678 (1999).
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7. Ross, A.H., Baltimore, D., and Eisen, H.N. Phosphotyrosine-containing proteins isolated by affinity chromatography with antibodies to a synthetic hapten. *Nature* **294**, 654-656 (1981).

Related Product

Phosphotyrosine Monoclonal Antibody (Clone 18F6) - Cat. No. 10221

Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent under separate cover to the MSDS supervisor at your institution.

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