Revision 4

#9416 Store at -20C

Phospho-Tyrosine Mouse mAb (P-Tyr-102)

Cell Signaling TECHNOLOGY®

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

Applications:	Reactivity:	Sensitivity:	Source/Isotype:
WB, IP, FC-FP, E-P	All	Endogenous	Mouse IgG1

Product Usage Information

Application	Dilution
Western Blotting	1:2000
Immunoprecipitation	1:50
Flow Cytometry (Fixed/Permeabilized)	1:400
Peptide ELISA (DELFIA)	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity / Sensitivity

Phospho-Tyrosine Mouse mAb (P-Tyr-102) is a high affinity IgG1 monoclonal antibody. ELISAs using a wide variety of phospho-peptides show that P-Tyr-102 binds phospho-Tyr in a manner largely independent of the surrounding amino acid sequence.
2D gel western blot analysis of pervanadate-treated cell extracts also shows that P-Tyr-102 interacts with a broad range of tyrosine-phosphorylated proteins. P-Tyr-102's fine specificity in terms of the sequence context in which it can recognize phospho-tyrosine seems to differ slightly from that of P-Tyr-100 #9411. P-Tyr-102 does not recognize peptides containing phospho-Ser or phospho-Thr. (U.S. Patent No's.: 6,441,140; 6,982,318; 7,259,022; 7,344,714; U.S.S.N. 11,484,485; and all foreign equivalents.)

Source / Purification

Monoclonal antibody is produced by immunizing animals with synthetic phospho-Tyr-containing peptides.

Background

Tyrosine phosphorylation plays a key role in cellular signaling (1). Research studies have shown that in cancer, unregulated tyrosine kinase activity can drive malignancy and tumor formation by generating inappropriate proliferation and survival signals (2). Antibodies specific for phospho-tyrosine (3,4) have been invaluable reagents in these studies. The phospho-tyrosine monoclonal antibodies developed by Cell Signaling Technology are exceptionally sensitive tools for studying tyrosine phosphorylation and monitoring tyrosine kinase activity in high throughput drug discovery.

Background References

1. Schlessinger, J. (2000) *Cell* 103, 211-25.
2. Blume-Jensen, P. and Hunter, T. (2001) *Nature* 411, 355-65.
3. Ward, S.G. et al. (1992) *J Biol Chem* 267, 23862-9.
4. Glenney, J.R. et al. (1988) *J Immunol Methods* 109, 277-85.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

WB: Western Blotting **IP:** Immunoprecipitation **FC-FP:** Flow Cytometry (Fixed/Permeabilized) **E-P:** Peptide ELISA (DELFIA)

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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