

#9386 Store at -20°C

## Phospho-Threonine (42H4) Mouse mAb



**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.**

<b>Applications:</b> WB, IP, E-P	<b>Reactivity:</b> All	<b>Sensitivity:</b> Endogenous	<b>Source/Isotype:</b> Mouse IgM
-------------------------------------	---------------------------	-----------------------------------	-------------------------------------

### Product Usage Information

#### Application

Western Blotting  
Immunoprecipitation  
Peptide ELISA (DELFI A)

#### Dilution

1:1000  
1:50  
1:2000

### 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-Threonine (42H4) Mouse mAb binds phosphorylated threonine residues in a manner largely independent of the surrounding amino acid sequence. The antibody is phospho-specific but does not cross-react with phospho-tyrosine-containing sequences. It does show slight cross-reactivity with a few phospho-serine-containing peptides. By ELISA, it recognizes a wide variety of threonine-phosphorylated peptides. (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 phospho-Thr-containing peptides.

### Background

Much of the dynamic behavior of cellular proteins, including the regulation of molecular interactions (1), subcellular localization (2), and transcriptional regulation (3) is controlled by a variety of post-translational modifications (4). Antibodies specific for these post-translational modifications are invaluable tools in the quest to understand normal and pathogenic molecular and cellular behavior. General protein modification antibodies are designed to react with modified amino acid residues (e.g. phospho-threonine, phospho-tyrosine, acetyl-lysine, nitro-tyrosine) independently of the sequence in which they are embedded. This ability to recognize modified residues in a "context-independent" fashion gives these antibodies broad reactivities, presumably conferring upon them the ability to react with hundreds of distinct proteins. This broad pattern of reactivity makes these antibodies especially valuable in multiplex analyses and target discovery programs. Protein kinases are among the most abundant eukaryotic regulatory proteins; over 500 separate kinase genes are encoded in mammalian genomes (5,6). In spite of the importance of kinases in eukaryotic biology, relatively few of their physiological targets are known. Phospho-Threonine Antibody (P-Thr-Polyclonal) #9381 and Phospho-Threonine (42H4) Monoclonal Antibody #9386 provide powerful tools for discovering targets of serine/threonine kinases, for monitoring and characterizing in vitro threonine phosphorylation reactions as well as for high throughput Ser/Thr kinase drug discovery.

### Background References

1. Yaffe, M.B. and Elia, A.E. (2001) *Curr Opin Cell Biol* 13, 131-8.
2. Appella, E. and Anderson, C.W. (2001) *Eur J Biochem* 268, 2764-72.
3. Jenuwein, T. and Allis, C.D. (2001) *Science* 293, 1074-80.
4. Krishna, R.G. and Wold, F. (1993) *Adv Enzymol Relat Areas Mol Biol* 67, 265-98.
5. Venter, J.C. et al. (2001) *Science* 291, 1304-51.
6. Manning, G. et al. (2002) *Science* 298, 1912-34.

### 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 **E-P:** Peptide ELISA (DELFI A)

### 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

## Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit [cellsignal.com/trademarks](https://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.