

# Phospho-Threonine Antibody (P-Thr-Polyclonal)

✓ 100 µl  
(10 western blots)



**Orders** ■ 877-616-CELL (2355)  
orders@cellsignal.com  
**Support** ■ 877-678-TECH (8324)  
info@cellsignal.com  
**Web** ■ www.cellsignal.com

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Applications	Species Cross-Reactivity*	Source
W, IP, E-P Endogenous	All	Rabbit**

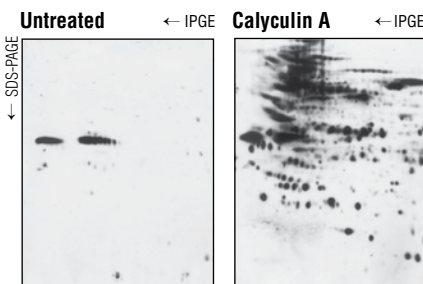
**Background:** Much of the dynamic behavior of cellular proteins, including the regulation of molecular interactions (1), subcellular localization (2) and transcriptional regulation (3) is controlled by a variety of posttranslational modifications (4). Antibodies specific for these posttranslational 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) mAb #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.

**Specificity/Sensitivity:** Phospho-Threonine Antibody (P-Thr-Polyclonal) detects proteins and peptides phosphorylated at threonine residues in a manner largely independent of the surrounding amino acid sequence. The antibody is phospho-specific and may cross-react with some phospho-tyrosine- or phospho-serine-containing sequences. By ELISA, it recognizes a wide variety of threonine-phosphorylated peptides, and by 2D gel Western blot analysis, it recognizes a large number of presumably threonine-phosphorylated proteins. CST recommends the use of Phospho-Threonine-Proline mAb (p-Thr-Pro-101) #9391 to detect proteins containing threonine followed by proline. (Patented, U.S. No. 6,441,140 and Patents Pending.)

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with synthetic phospho-Thr-containing peptides. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of extracts from Jurkat cells, untreated or calyculin A-treated (0.1 µM for 45 minutes prior to lysis) and subjected to 2-D gel electrophoresis, using Phospho-Threonine Antibody (P-Thr-Polyclonal).

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

\*Species cross-reactivity is determined by western blot.

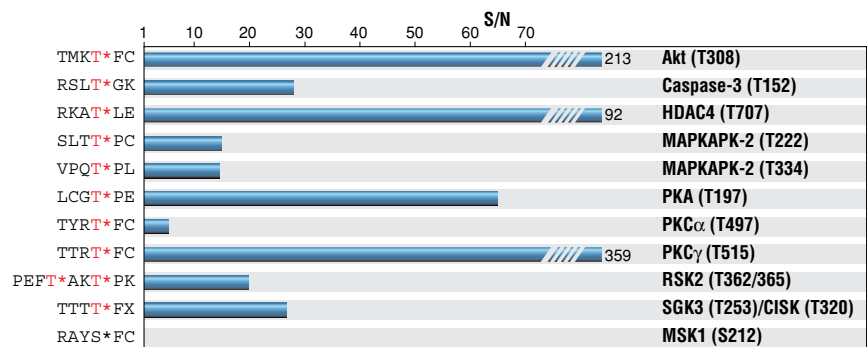
\*\*Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Antibody Dilutions:**

Western Blotting	1:1000
Immunoprecipitation	1:50
ELISA (Peptide)	1:2000

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.



Phospho-Threonine Antibody (P-Thr-Polyclonal) DELFIA® Assay: Signal-to-noise ratio of phospho- versus nonphospho-peptides. (T\* denotes phosphorylated threonine.) (DELFIATM is a registered trademark of PerkinElmer, Inc.)

**Background References:**

- Yaffe, M.B. and Elia, A.E. (2001) *Curr. Opin. Cell Biol.* 13, 131–138.
- Appella, E. and Anderson, C.W. (2001) *J. Biochem. (Tokyo)* 268, 2764–2772.
- Jenuwein, T. and Allis, C.D. (2001) *Science* 293, 1074–1080.
- Krishna, R.G. and Wold, F. (1993) *Adv. Enzymol. Relat. Areas Mol. Biol.* 67, 265–298.
- Venter, J.C. et al. (2000) *Science* 291, 1304–1351.
- Manning, G. et al. (2002) *Science* 298, 1912–1934.

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