

#5161 Store at -20°C

Phospho-ATRIP (Ser224) Antibody



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.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB	H	Endogenous	86	Rabbit	#Q8WXE1	84126

Product Usage Information

Application

Western Blotting

Dilution

1:1000

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.

Specificity / Sensitivity

Phospho-ATRIP (Ser224) Antibody detects endogenous levels of ATRIP protein only when phosphorylated at Ser224.

Species predicted to react based on 100% sequence homology:

Mouse, Monkey

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser224 of the human ATRIP protein.

Background

In response to genomic stress, the ATR interacting protein (ATRIP) binds and is phosphorylated by the DNA damage-and checkpoint-activated kinase ATR (ataxia-telangiectasia mutated and rad3-related). Both ATR and ATRIP are integral for checkpoint signaling and are critical in the DNA repair response (1-3). Direct interaction between ATRIP and replication protein A (RPA) at RPA-coated, single-stranded DNA results in the recruitment of phosphorylated ATR/ATRIP to stalled replication forks and sites of DNA damage (3). ATR/ATRIP coordinate DNA repair and cell cycle progression in conjunction with key regulatory proteins, such as Rad17 and the 9-1-1 complex (4). ATR associated with ATRIP can also be stimulated by topoisomerase II binding protein (TOPBP1), suggesting that ATRIP may regulate both ATR localization and activity (5). Cyclin dependent kinase 2 (CDK2) may participate in the regulation of DNA damage response and cell cycle control through phosphorylation of ATRIP at Ser224 (6).

Background References

1. Cortez, D. et al. (2001) *Science* 294, 1713-1716.
2. Itakura, E. et al. (2004) *Biochem. Biophys. Res. Commun.* 323, 1197-1202.
3. Zou, L. and Elledge, S.J. (2003) *Science* 300, 1542-1548.
4. Yang, X.H. and Zou, L. (2006) *Methods Enzymol.* 409, 118-131.
5. Ball, H.L. et al. (2007) *Mol Cell Biol* 27, 3367-77.
6. Myers, J.S. et al. (2007) *Cancer Res* 67, 6685-90.

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

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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