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Phospho-TOPBP1(S1159) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP3774a

Specification

Phospho-TOPBP1(S1159) Antibody - Product Information

Application	**DB,E**
Primary Accession	Q92547
Other Accession	Q6ZQF0, NP_008958.2
Reactivity	**Human**
Predicted	**Mouse**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit Ig**

Phospho-TOPBP1(S1159) Antibody - Additional Information

Gene ID 11073

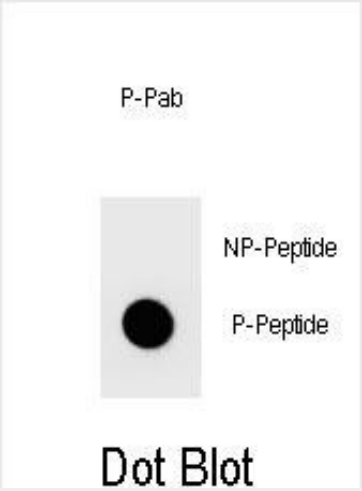
Other Names
DNA topoisomerase 2-binding protein 1, DNA topoisomerase II-beta-binding protein 1, TopBP1, DNA topoisomerase II-binding protein 1, TOPBP1, KIAA0259

Target/Specificity
This TOPBP1 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding S1159 of human TOPBP1.

Dilution
DB~~1:500

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

Storage
Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.



Dot blot analysis of Phospho-TOPBP1-S1159 Antibody Phospho-specific Pab (Cat. #AP3774a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.6ug per ml.

Phospho-TOPBP1(S1159) Antibody - Background

This gene encodes a binding protein which interacts with the C-terminal region of topoisomerase II beta. This interaction suggests a supportive role for this protein in the catalytic reactions of topoisomerase II beta through transient breakages of DNA strands.

Phospho-TOPBP1(S1159) Antibody - References

Huo, Y.G., et al. Biochem. Biophys. Res. Commun. 401(3):401-405(2010)
Blackford, A.N., et al. Proc. Natl. Acad. Sci. U.S.A. 107(27):12251-12256(2010)
Takeishi, Y., et al. Genes Cells 15(7):761-771(2010)
Gong, Z., et al. Mol. Cell 37(3):438-446(2010)
Couch, F.J., et al. Cancer Epidemiol. Biomarkers

Precautions
Phospho-TOPBP1(S1159) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Phospho-TOPBP1(S1159) Antibody - Protein Information

Name TOPBP1

Synonyms KIAA0259

Function
Required for DNA replication. Plays a role in the rescue of stalled replication forks and checkpoint control. Binds double-stranded DNA breaks and nicks as well as single-stranded DNA. Recruits the SWI/SNF chromatin remodeling complex to E2F1-responsive promoters. Down-regulates E2F1 activity and inhibits E2F1-dependent apoptosis during G1/S transition and after DNA damage. Induces a large increase in the kinase activity of ATR (PubMed:16530042).

Cellular Location
Nucleus. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome. Cytoplasm, cytoskeleton, spindle pole Chromosome. Note=Detected on unpaired autosomes in meiotic prophase cells. Detected on X and Y chromosomes during later stages of prophase Colocalizes with ATR and H2AX at unsynapsed chromosome cores during prophase (By similarity). Has a uniform nuclear distribution during G phase. Colocalizes with BRCA1 at stalled replication forks during S phase. In mitotic cells it colocalizes with BRCA1 at spindle poles and centrosomes during metaphase and anaphase. Detected in discrete foci together with PML and numerous DNA repair enzymes after DNA damage by alkylating agents, UV or gamma irradiation. Localizes to sites of DNA damage in a H2AX- independent manner.

Tissue Location
Highly expressed in heart, brain, placenta, lung and kidney.

Prev. 19(1):251-257(2010)

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Phospho-TOPBP1(S1159) Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Phospho-TOPBP1(S1159) Antibody - Citations

- Overexpression of TopBP1, a canonical ATR/Chk1 activator, paradoxically hinders ATR/Chk1 activation in cancer
- Cell Cycle-Dependent Switch of TopBP1 Functions by Cdk2 and Akt
- AKT signaling promotes DNA damage accumulation and proliferation in polycystic kidney disease
- Akt switches TopBP1 function from checkpoint activation to transcriptional regulation through phosphoserine binding-mediated oligomerization.