Product Datasheet

TPX2 Antibody - BSA Free
NB500-184

Unit Size: 100 ul

Store at 4C. Do not freeze.

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Publications: 2

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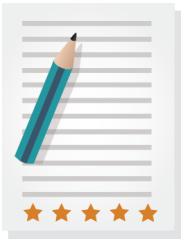
Updated 2/21/2025 v.20.1



NB500-184

TPX2 Antibody - BSA Free

Product Information

Unit Size	100 ul
Concentration	1.0 mg/ml
Storage	Store at 4C. Do not freeze.
Clonality	Polyclonal
Preservative	0.09% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	Tris-Citrate/Phosphate (pH 7.0 - 8.0)

Product Description

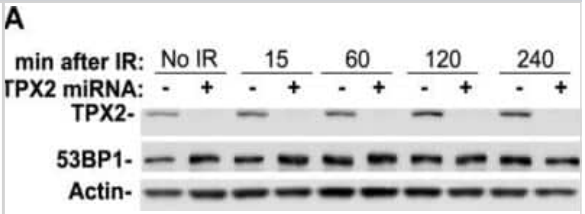
Host	Rabbit
Gene ID	22974
Gene Symbol	TPX2
Species	Human
Immunogen	The immunogen recognized by this antibody maps to a region between residue 700 and the C-terminus (residue 749) of human TPX2 using the numbering given in Swiss-Prot entry Q9ULW0 (GeneID 22974).

Product Application Details

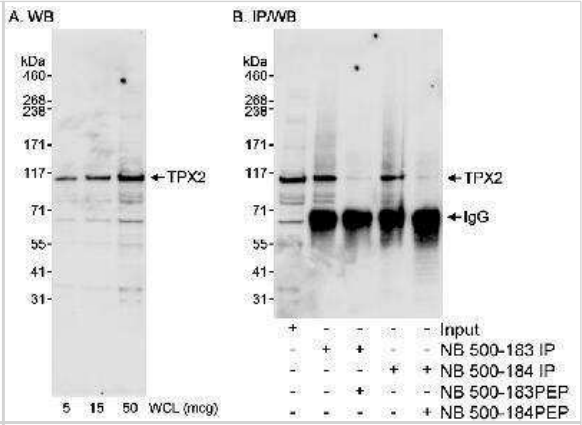
Applications	Western Blot, Immunocytochemistry/ Immunofluorescence, Immunoprecipitation, Knockdown Validated
Recommended Dilutions	Western Blot 1:5000-1:15000, Immunocytochemistry/ Immunofluorescence, Immunoprecipitation 1-4 ug/mg lysate, Knockdown Validated
Application Notes	NB500-184 may be used for Western blot and immunoprecipitation. Suggested working dilutions: Western Blot: 1:5000 - 1:15000, Immunoprecipitation: 1 to 4 ug/mg lysate, Histo/Cytochemistry: not tested. The investigator should determine the optimal working dilution for a specific application. Use in Immunocytochemistry/immunofluorescence reported in scientific literature (PMID 25688093)

Images

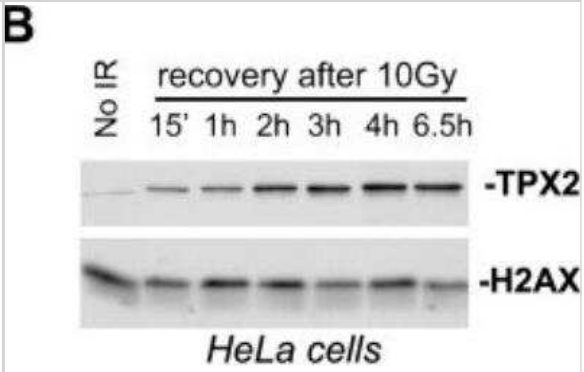
Western Blot: TPX2 Antibody [NB500-184] - Depletion of TPX2 causes defects in 53BP1 ionizing radiation-induced foci formation. The protein level of 53BP1 is not affected by miRNA-mediated depletion of TPX2. Levels of actin were used as loading controls. Image collected and cropped by CiteAb from the following publication (dx.plos.org/10.1371/journal.pone.0110994), licensed under a CC-BY license.



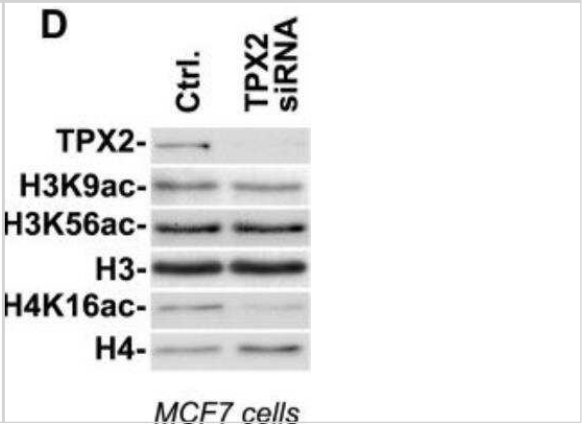
Western Blot: TPX2 Antibody [NB500-184] - Detection of Human TPX2 on HeLa whole cell lysate using NB500-184. TPX2 was also immunoprecipitated using NB500-183 at 0.4 ug/mg lysate.



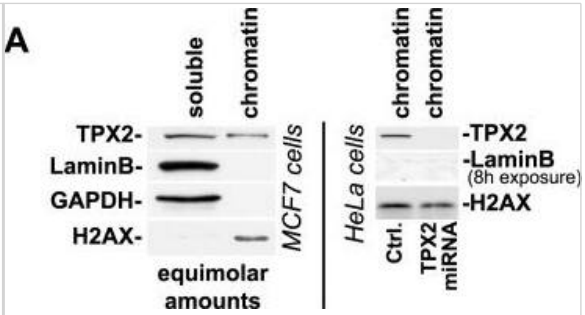
Western Blot: TPX2 Antibody [NB500-184] - TPX2 is constitutively associated with chromatin and impacts the DAPI staining pattern and H4K16ac levels. TPX2 gets enriched in chromatin fractions isolated from HeLa cells after treatment with 10 Gy of ionizing radiation. Note the constitutive association of TPX2 with the chromatin in non-irradiated cells. Levels of H2AX were used as a loading control. Image collected and cropped by CiteAb from the following publication (dx.plos.org/10.1371/journal.pone.0110994), licensed under a CC-BY license.



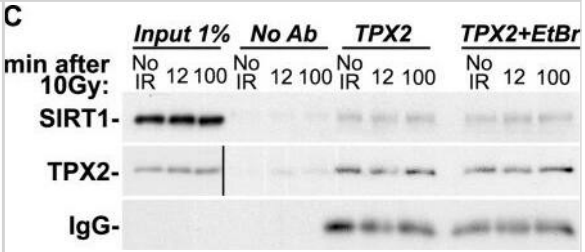
Western Blot: TPX2 Antibody [NB500-184] - TPX2 is constitutively associated with chromatin and impacts the DAPI staining pattern and H4K16ac levels Depletion of TPX2 by siRNA causes a decrease in H4K16ac levels whereas the levels of H3K9ac and H3K56ac remain unchanged. Image collected and cropped by CiteAb from the following publication (dx.plos.org/10.1371/journal.pone.0110994), licensed under a CC-BY license.



Western Blot: TPX2 Antibody [NB500-184] - TPX2 is constitutively associated with chromatin & impacts the DAPI staining pattern & H4K16ac levels.(A) Although the majority of TPX2 is found in the soluble fraction (see Material & Methods), a small but clearly detectable sub-population of TPX2 constitutively associates with stringent chromatin fractions obtained from MCF7 cells (left panel) or HeLa cells (right panel). These chromatin fractions contain histones but not nuclear LaminB. Upon expression of an inducible TPX2 targeting miRNA (or upon transfection with siRNA; see D) the protein was depleted from chromatin fractions. Ctrl: control cells with no induction of TPX2 miRNA. (B) TPX2 gets enriched in chromatin fractions isolated from HeLa cells after treatment with 10 Gy of ionizing radiation. Note the constitutive association of TPX2 with the chromatin in non-irradiated cells. Levels of H2AX were used as a loading control. (C) Overexpression of GFP-TPX2 or His-TPX2 causes abnormal DAPI staining in MCF7 cells compared to surrounding non-transfected cells or cells transfected with GFP. This is indicative of changes in chromatin structure. Enlargements of white frames are shown. In agreement with previous reports, overexpressed TPX2 is mostly found in the nucleus but also associates with the cytoskeleton [2]. (D-F) Depletion of TPX2 by siRNA (D) or miRNA (F) causes a decrease in H4K16ac levels whereas the levels of H3K9ac & H3K56ac remain unchanged. (E) Quantification of H3K9ac & H3K56ac levels from MCF7 cells transfected with control or TPX2 siRNA (n=4 independent experiments each; p(t test)>0.05; NS: non significant; Error bars represent SE). Stripping of western blots & re-development with antibodies specific for H3 & H4 ensured equal loading. See text for details. Image collected & cropped by CiteAb from the following publication (https://dx.plos.org/10.1371/journal.pone.0110994), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: TPX2 Antibody [NB500-184] - SIRT1 modulates the levels of H4K16ac & γ-H2AX & is in complex with TPX2.(A) siRNA-mediated loss of SIRT1 in HeLa cells increases H4K16ac levels & decreases ionizing radiation-dependent γ-H2AX levels when compared to controls. (B) Overexpression of SIRT1 in MCF7 cells decreases H4K16ac levels & increases ionizing radiation-dependent γ-H2AX levels when compared to controls. (C) Co-immunoprecipitations with TPX2 antibodies from HeLa cells with & without ionizing radiation treatment as indicated & in the absence or presence of ethidium bromide (EtBr). (The Input for TPX2 is from a longer exposure of the same blot.) (D) Co-immunoprecipitations with SIRT1 antibodies from HeLa cells with & without ionizing radiation treatment as indicated. Beads without antibodies (No Ab) were used as controls. Cells were treated with 10 Gy (or left untreated) & harvested after 1h recovery (A-B) or as indicated (C-D). See text for details. Levels of H2AX & H4 were used as loading controls. IR: ionizing radiation. Image collected & cropped by CiteAb from the following publication (https://dx.plos.org/10.1371/journal.pone.0110994), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



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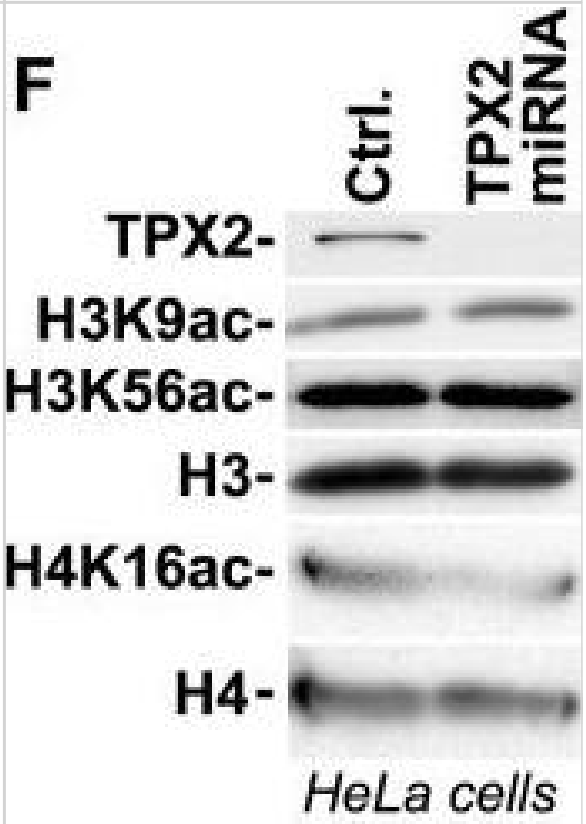

Publications

Shim SY, Perez de Castro Insua I, Neumayer G et al. Phosphorylation of Targeting Protein for Xenopus kinesin-like protein 2 (TPX2) at threonine 72 in spindle assembly J. Biol. Chem. 2015-02-16 [PMID: 25688093] (IP, ICC/IF, WB, Human)

Neumayer G, Nguyen Md. TPX2 Impacts Acetylation of Histone H4 at Lysine 16: Implications for DnA Damage Response PLoS OnE et al. 2014-11-04 [PMID: 25365214] (WB, CoIP, Human)

Details:
TPX2 antibody used for WB and CoIP in experiments involving MCF7 as well as HeLa cells transfected or not with siRnA-TPX2.

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NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

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