SANTA CRUZ BIOTECHNOLOGY, INC.

TPX2 (B-10): sc-390183

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The Power to Question

BACKGROUND

TPX2 (targeting protein for Xklp2) is a microtubule-associated protein involved in targeting the motor protein Xklp2 to microtubules. Ran-GTP activates TPX2 for the chromatin-induced microbutule assembly during M phase. Aurora-A kinase associates with TPX2 at the spindle apparatus and may regulate TPX2 via phosphorylation during the spindle assembly. TPX2 appears to play a structural role in spindle formation. TPX2 activates Eg2 in a microtubule-dependent manner by stimulating the phosphorylation and kinase activity of Eg2. TPX2 is inactivated by binding to importin a, a nuclear import factor. Finally, the suppression of TPX2 with RNA interference causes defects in microtubule organization during mitosis.

REFERENCES

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3. Kufer, T.A., Sillje, H.H., Korner, R., Gruss, O.J., Meraldi, P. and Nigg, E.A. 2002. Human TPX2 is required for targeting Aurora-A kinase to the spindle. J. Cell Biol. 158: 617-623.
4. Garrett, S., Auer, K., Compton, D.A. and Kapoor, T.M. 2002. hTPX2 is required for normal spindle morphology and centrosome integrity during vertebrate cell division. Curr. Biol. 12: 2055-2059.
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CHROMOSOMAL LOCATION

Genetic locus: TPX2 (human) mapping to 20q11.21; Tpx2 (mouse) mapping to 2 H1.

SOURCE

TPX2 (B-10) is a mouse monoclonal antibody raised against a peptide mapping at the N-terminus of TPX2 of rat origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-390183 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

TPX2 (B-10) is recommended for detection of TPX2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TPX2 siRNA (h): sc-37653, TPX2 siRNA (m): sc-37654, TPX2 shRNA Plasmid (h): sc-37653-SH, TPX2 shRNA Plasmid (m): sc-37654-SH, TPX2 shRNA (h) Lentiviral Particles: sc-37653-V and TPX2 shRNA (m) Lentiviral Particles: sc-37654-V.

Molecular Weight (predicted) of TPX2: 86 kDa.

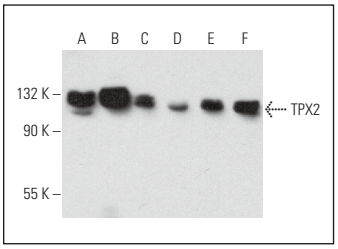
Molecular Weight (observed) of TPX2: 86/100 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, NIH/3T3 whole cell lysate: sc-2210 or C6 whole cell lysate: sc-364373.

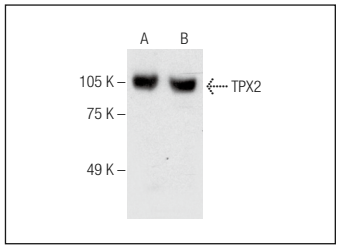
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



TPX2 (B-10): sc-390183. Western blot analysis of TPX2 expression in K-562 (**A**), MOLT-4 (**B**), NIH/3T3 (**C**), C3H/10T1/2 (**D**), C6 (**E**) and H19-7/IGF-IR (**F**) whole cell lysates.



TPX2 (B-10): sc-390183. Western blot analysis of TPX2 expression in Jurkat (**A**) and KNRK (**B**) whole cell lysates.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.