

TPX2 (B-5): sc-376812

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 microtubule 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 α , a nuclear import factor. Finally, the suppression of TPX2 with RNA interference causes defects in microtubule organization during mitosis.

CHROMOSOMAL LOCATION

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

SOURCE

TPX2 (B-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 635-675 near the C-terminus of TPX2 of human origin.

PRODUCT

Each vial contains 200 μ g IgM 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-376812 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

TPX2 (B-5) 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 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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.

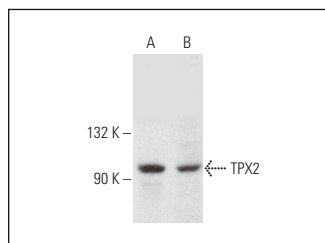
Molecular Weight (observed) of TPX2: 86/100 kDa.

Positive Controls: KNRK whole cell lysate: sc-2214, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

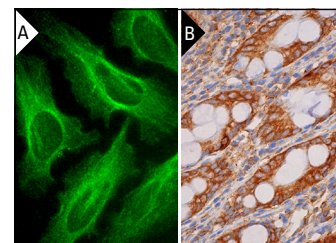
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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 L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohisto-mount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



TPX2 (B-5): sc-376812. Western blot analysis of TPX2 expression in NIH/3T3 (A) and KNRK (B) whole cell lysates.



TPX2 (B-5): sc-376812. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Huang, Y., et al. 2014. TPX2 is a prognostic marker and contributes to growth and metastasis of human hepatocellular carcinoma. *Int. J. Mol. Sci.* 15: 18148-18161.
- Liu, Q., et al. 2015. TPX2 as a novel prognostic biomarker for hepatocellular carcinoma. *Hepatol. Res.* 45: 906-918.
- Tomii, C., et al. 2017. TPX2 expression is associated with poor survival in gastric cancer. *World J. Surg. Oncol.* 15: 14.
- Lin, C.C., et al. 2018. CoA synthase regulates mitotic fidelity via CBP-mediated acetylation. *Nat. Commun.* 9: 1039.
- Besso, M.J., et al. 2020. Identification of early stage recurrence endometrial cancer biomarkers using bioinformatics tools. *Oncol. Rep.* 44: 873-886.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.