

TPX2 (D2R5C) XP<sup>®</sup> Rabbit mAb

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IF-IC	H Mk	Endogenous	100	Rabbit IgG	#Q9ULW0	22974

### Product Usage Information

#### Application

Western Blotting  
Immunoprecipitation  
Immunofluorescence (Immunocytochemistry)

#### Dilution

1:1000  
1:100  
1:1600

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

### Specificity/Sensitivity

TPX2 (D2R5C) XP<sup>®</sup> Rabbit mAb recognizes endogenous levels of total TPX2 protein.

### Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Lys420 of human TPX2 protein.

### Background

The Ras family small GTPase Ran is involved in nuclear envelope formation, assembly of the mitotic spindle, and nuclear transport (1,2). TPX2, a target of active Ran (RanGTP), is a microtubule nucleating protein. TPX2 is inactive when bound to nuclear importin-alpha. RanGTP activity disrupts this interaction, relieving inhibition of TPX2 (3). TPX2 binding activates Aurora A kinase and promotes its localization to the mitotic spindle (4,5). DNA damage in mitosis leads to loss of interaction between Aurora A and TPX2 and inactivation of Aurora A kinase (6). TPX2 is highly expressed in pancreatic cancer cells, and knockdown of TPX2 expression in these cells is associated with increased sensitivity to paclitaxel (7).

### Background References

1. Quimby, B.B. and Dasso, M. (2003) *Curr Opin Cell Biol* 15, 338-44.
2. Hetzer, M. et al. (2002) *Nat Cell Biol* 4, E177-84.
3. Gruss, O.J. and Vernos, I. (2004) *J Cell Biol* 166, 949-55.
4. Kufer, T.A. et al. (2002) *J Cell Biol* 158, 617-23.
5. Bayliss, R. et al. (2004) *Cell Cycle* 3, 404-7.
6. Bhatia, P. et al. (2010) *Cell Cycle* 9, 4592-9.
7. Warner, S.L. et al. (2009) *Clin Cancer Res* 15, 6519-28.

### 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

**W:** Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)

### Cross-Reactivity Key

**H:** Human **Mk:** Monkey

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