Revision 1

Store at -20C

#13445

Securin (D2B6O) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H	Endogenous	25	Rabbit IgG	#O95997	9232

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:200

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

Securin (D2B6O) Rabbit mAb recognizes endogenous levels of total securin protein. Based on western blot of overexpressed proteins, this antibody will also recognize securin 2 (PTTG2) to a lesser extent.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val19 of human securin (PTTG1) protein.

Background

Securin is a regulatory protein that contributes to mitotic checkpoint control, p53 activity, DNA repair, and cell migration. The securin protein prevents premature separation of sister chromatids by inhibiting the protease separase, which cleaves the cohesin complex at the onset of anaphase to allow for sister chromatid segregation (1,2). In mouse oocytes, securin regulates cyclin B stability and G2/M transition (3). Securin negatively affects the transcriptional activity of p53, preventing p53-regulated apoptosis (4). Research studies indicate that securin plays a role in microtubule nucleation, cell polarization, and cell migration (5). Additional research indicates that securin expression may be useful as a biomarker for human breast cancer (6-8). The pituitary tumor-transforming gene 1 (*PTTG1*) encodes for securin protein, while the highly homologous securin 2 protein is transcribed from the related *PTTG2* gene. Securin 2 (PTTG2) protein lacks the ability to inhibit separase activity and may function primarily in cell adhesion and migration (9,10).

Background References

1. Yanagida, M. (2005) *Philos Trans R Soc Lond B Biol Sci* 360, 609-21.
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3. Marangos, P. and Carroll, J. (2008) *Nat Cell Biol* 10, 445-51.
4. Bernal, J.A. et al. (2002) *Nat Genet* 32, 306-11.
5. Moreno-Mateos, M.A. et al. (2011) *Mol Biol Cell* 22, 4302-11.
6. Talvinen, K. et al. (2013) *APMIS* 121, 945-53.
7. Talvinen, K. et al. (2009) *Br J Cancer* 101, 1005-10.
8. Ogbagabriel, S. et al. (2005) *Mod Pathol* 18, 985-90.
9. Han, X. and Poon, R.Y. (2013) *Mol Cell Biol* 33, 3400-15.
10. Méndez-Vidal, C. et al. (2013) *Cell Death Dis* 4, e530.

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

Cross-Reactivity Key

H: Human

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