Revision 1

Store at -20C

#14812

PLK2 (D5R2B) Rabbit mAb

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H	Endogenous	70	Rabbit IgG	#Q9NYY3	10769

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

PLK2 (D5R2B) Rabbit mAb recognizes endogenous levels of total PLK2 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Pro67 of human PLK2 protein.

Background

At least five distinct polo-like kinases exist in mammalian cells: PLK1, PLK2, PLK3, PLK4/SAK, and the non-catalytic PLK5 protein (1). The p53-induced PLK2 functions in centriole duplication, as well as at spindle and S phase checkpoints (3-5). Research studies show that PLK2 expression is related to chemosensitivity in ovarian cancer. Downregulation of PLK2 expression in chemosensitive ovarian cancer cells is associated with a greater chance of relapse in patients following specific treatment regimens (6). PLK2 can phosphorylate α-synuclein at Ser129, which is a site shown to be involved in diseases of the central nervous system (7,8). Polo-like kinase 2 also phosphorylates GEFs and GAPs, regulating Ras and Rap small GTPase function in neurons (9).

Background References

1. de Cárcer, G. et al. (2011) *Cell Cycle* 10, 2255-62.
2. Cizmecioglu, O. et al. (2008) *Cell Cycle* 7, 3548-55.
3. Burns, T.F. et al. (2003) *Mol Cell Biol* 23, 5556-71.
4. Matthew, E.M. et al. (2007) *Cell Cycle* 6, 2571-8.
5. Cizmecioglu, O. et al. (2012) *J Cell Sci* 125, 981-92.
6. Syed, N. et al. (2011) *Cancer Res* 71, 3317-27.
7. Inglis, K.J. et al. (2009) *J Biol Chem* 284, 2598-602.
8. Bergeron, M. et al. (2014) *Neuroscience* 256, 72-82.
9. Lee, K.J. et al. (2011) *Neuron* 69, 957-73.

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

Trademarks and Patents

Limited Uses

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