Revision 1

Store at -20C

#4294

PHLDA3 Antibody

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	H M R Mk	Endogenous	15	Rabbit	#Q9Y5J5	23612

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

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

Specificity/Sensitivity

PHLDA3 Antibody detects endogenous level of total PHLDA3 protein.

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human PHLDA3 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Pleckstrin homology-like domain family A member 3 (PHLDA3) is one of three relatively small, similar proteins that share a common pleckstrin homology (PH) domain. Expression of PHLDA3 and the related PHLDA1 occurs in several fetal and adult tissues, in contrast to the more restricted expression of PHLDA2 seen in mouse tissues (1). PHLDA3 is one of several proteins induced following treatment of tumor cells with cisplatin, an anti-cancer drug that cross-links DNA and promotes apoptosis through activation of the tumor suppressor p53 (2). Additional evidence that PHLDA3 is involved in promoting apoptosis through p53 came from a study examining the opposing effects of p53 and Akt in tumor development. Tumor suppressor p53 binds the PHLDA3 promoter to induce transcription. Induced overexpression of PHLDA3 increases apoptosis while deletion of PHLDA3 results in increased Akt activity and a reduction in p53-mediated apoptosis. PHLDA3 appears to compete with the PH domain of Akt, preventing Akt activation and promotion of Akt-induced cell survival pathways (3).

Background References

1. Frank, D. et al. (1999) *Mamm Genome* 10, 1150-9.
2. Kerley-Hamilton, J.S. et al. (2005) *Oncogene* 24, 6090-100.
3. Kawase, T. et al. (2009) *Cell* 136, 535-50.

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

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Mk:** Monkey

Trademarks and Patents

Limited Uses

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