Revision 1

Store at -20C

#4045

WWOX Antibody

Cell Signaling TECHNOLOGY®

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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	H M R	Endogenous	46	Rabbit	#Q9NZC7	51741

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

WWOX Antibody detects endogenous levels of total WWOX protein.

Species predicted to react based on 100% sequence homology

Monkey

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Thr103 of WWOX. Antibodies were purified by peptide affinity chromatography.

Background

The *WWOX* (WW domain-containing oxidoreductase) gene encodes a protein with two WW domains followed by a short-chain dehydrogenase domain that was identified from a genomic region 16q23 of high instability, FRA16D (1,2). The mouse homolog, termed Wox1, was found to enhance TNFα-mediated apoptosis (3). The *WWOX* gene is disrupted in a many cancer types by deletions or translocation which has revealed a tumor suppressor function (4-7). In contrast, high levels of WWOX have been shown in shown in premetastic cancers, including breast and prostate (8-10). Stress stimuli can induce tyrosine phosphorylation within the first WW domain (Tyr33), followed by nuclear translocation and binding to and stabilizing the p53 tumor suppressor protein (11). WWOX and p53 can induce apoptosis in a synergistic manner. Tyrosine phosphorylation and nuclear translocation of WWOX has been implicated in the progression of cancers to metastatic states (10).

Background References

1. Bednarek, A.K. et al. (2000) *Cancer Res.* 60, 2140-2145.
2. Ried, K. et al. (2000) *Hum. Mol. Genet.* 9, 1651-1663.
3. Chang, N.S. et al. (2001) *J. Biol. Chem.* 276, 3361-3370.
4. Ramos, D. and Aldaz, C.M. (2006) *Adv. Exp. Med. Biol.* 587, 149-159.
5. Paige, A.J. et al. (2001) *Proc. Nat.l Acad. Sci. USA* 98, 11417-11422.
6. Bednarek, A.K. et al. (2001) *Cancer Res.* 61, 8068-8073.
7. Aqeilan, R.I. et al. (2007) *Proc. Natl. Acad. Sci. USA* 104, 3949-3954.
8. Driouch, K. et al. (2002) *Oncogene* 21, 1832-1840.
9. Watanabe, A. et al. (2003) *Cancer Res.* 63, 8629-8633.
10. Chang, N.S. et al. (2005) *Oncogene* 24, 714-723.
11. Chang, N.S. et al. (2005) *J. Biol. Chem.* 280, 43100-43108.

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

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