Revision 1

Phospho-TNK1 (Tyr277) (D46E7) Rabbit mAb

Store at -20C

#5638

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	72 TNK1, 58 TNK1-C17orf61	Rabbit IgG	#Q13470	8711

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, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Phospho-TNK1 (Tyr277) (D46E7) Rabbit mAb detects endogenous levels of TNK1 protein only when the amplified gene product is phosphorylated at Tyr277.

Species predicted to react based on 100% sequence homology

Mouse, Rat

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Tyr277 of human TNK1 protein.

Background

Tyrosine kinase non-receptor 1 (TNK1) is related to the Ack1 (TNK2) non-receptor kinase that binds cdc42 and inhibits GTPase activity of this cell cycle regulator. TNK1 is broadly expressed in embryogenic tissues and leukemia cell lines, but is restricted to select adult tissues (1). TNK1 is a putative 72 kDa protein comprised of an N-terminal kinase domain, a central SH3 domain and a proline-rich tail. Interaction with PLCγ *in vitro* indicates a possible role in phospholipid signal transduction pathways (2). Though the exact mechanism is currently unclear, active TNK1 may play a role in regulating cell death by preventing TNF-α-induced NF-κB transactivation (3).
Phosphorylation of TNK1 on Tyr277 was identified at Cell Signaling Technology (CST) using PhosphoScan®, CST's LC-MS/MS platform for phosphorylation site discovery (4) and also reported independently in another publication using MS technology (5). Phosphorylation of TNK1 at Tyr277 was observed in select carcinoma cell lines and in tumors. A constitutively active, 58 kDa truncated TNK1 kinase resulting from fusion between the TNK1 and C17orf61 genes is seen in some cells (5). For additional information, visit PhosphoSitePlus™, CST's modification site knowledgebase, at www.phosphosite.org.

Background References

1. Hoehn, G.T. et al. (1996) *Oncogene* 12, 903-13.
2. Felschow, D.M. et al. (2000) *Biochem Biophys Res Commun* 273, 294-301.
3. Azoitei, N. et al. (2007) *Oncogene* 26, 6536-45.
4. Rush, J. et al. (2005) *Nat Biotechnol* 23, 94-101.
5. Gu, T.L. et al. (2010) *Leukemia* 24, 861-5.

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

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Limited Uses

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