

#5483 Store at -20°C

Phospho-TBK1/NAK (Ser172) (D52C2) XP® Rabbit mAb


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:
WB, IP, IF-IC, FC-FP	H M	Endogenous	84	Rabbit IgG	#Q9UHD2	29110

Product Usage Information

Application

Western Blotting
Immunoprecipitation
Immunofluorescence (Immunocytochemistry)
Flow Cytometry (Fixed/Permeabilized)

Dilution

1:1000
1:50
1:50 - 1:100
1:50 - 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.

For a carrier free (BSA and azide free) version of this product see product #54382.

Specificity / Sensitivity

Phospho-TBK1/NAK (Ser172) (D52C2) XP® Rabbit mAb detects endogenous levels of TBK1 only when phosphorylated at Ser172. This antibody may cross-react with phospho-IKKε. Phospho-TBK1/NAK (Ser172) (D52C2) XP® Rabbit mAb lacks sensitivity in fixed frozen mouse tissue by indirect immunofluorescent detection.

Species predicted to react based on 100% sequence homology:

Rat, Monkey, Xenopus, Bovine, Dog

Source / Purification

Monoclonal antibody is prepared from animals immunized with a synthetic phosphopeptide corresponding to residues surrounding Ser172 of human TBK1.

Background

TBK1 (TANK-binding kinase 1)/NAK (NF-κB activating kinase) is an IκB kinase (IKK)-activating kinase and can activate IKK through direct phosphorylation (1). TBK1 was identified through association with the TRAF binding protein, TANK, and found to function upstream of NIK and IKK in the activation of NF-κB (2). TBK1 induces IκB degradation and NF-κB activity through IKKβ. TBK1 may mediate IKK and NF-κB activation in response to growth factors that stimulate PKCε activity (1). TBK1 plays a pivotal role in the activation of IRF3 in the innate immune response (3).

TBK1 is phosphorylated at Ser172 within its activation loop, which is necessary for its kinase activity including the downstream phosphorylation of IRF3 (4,5).

Background References

1. Tojima, Y. et al. (2000) *Nature* 404, 778-82.
2. Pomerantz, J.L. and Baltimore, D. (1999) *EMBO J* 18, 6694-704.
3. Fitzgerald, K.A. et al. (2003) *Nat Immunol* 4, 491-6.
4. Kishore, N. et al. (2002) *J Biol Chem* 277, 13840-7.
5. McCoy, C.E. et al. (2008) *J Biol Chem* 283, 14277-85.

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

WB: Western Blotting **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)
FC-FP: Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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