Revision 1

#8155 Store at -20C

Phospho-TAB2 (Ser372) (D5A4) 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:
W, IP	H M R Mk	Endogenous	80-84	Rabbit IgG	#Q9NYJ8	23118

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:100

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-TAB2 (Ser372) (D5A4) Rabbit mAb recognizes endogenous levels of TAB2 protein only when phosphorylated at Ser372.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ser372 of human TAB2 protein.

Background

TAK1 is a mitogen-activated protein kinase kinase kinase activated by TGF-β and various pro-inflammatory signals (1,2). *In vivo*, TAK1 activation requires its association with TAK1 binding protein 1 (TAB1), which triggers TAK1 autophosphorylation at Thr184 and Thr187 (3,4). The TAB2 adaptor protein links TAK1 with TRAF6 to mediate TAK1 activation following IL-1 stimulation (5). Once activated, TAK1 phosphorylates the MAPK kinases MKK4 and MKK3/6, which activate JNK and p38 MAPK, respectively. TAK1 and TRAF6 also activate the NF-κB pathway by phosphorylating the NF-κB inducing kinase (NIK) to trigger subsequent activation of IKK (2,6). In addition to TAK1, TAB1 interacts with and activates p38α MAPK (7). Targeted disruption of the TAB1 gene in mice causes a drastic reduction in TAK1 activity and leads to embryonic lethality (8).
TAK1 is associated with TAB1 as well as either TAB2 or TAB3 (9). Activation of TAK1 is triggered by K63-ubiquitination of TRAF6, resulting in binding to TAB2 and TAB3 and autophosphorylation of TAK1 (10-12). Multiple phosphorylation sites have been identified in all three TAB family members that are triggered by IL-1 (13,14). TAB2 phosphorylation was identified at Ser372 and Ser524 (14).

Background References

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6. Wang, C. et al. (2001) *Nature* 412, 346-51.
7. Ge, B. et al. (2002) *Science* 295, 1291-4.
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10. Kishida, S. et al. (2005) *Genes Cells* 10, 447-54.
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12. Kanayama, A. et al. (2004) *Mol Cell* 15, 535-48.
13. Cheung, P.C. et al. (2003) *EMBO J* 22, 5793-805.
14. Mendoza, H. et al. (2008) *Biochem J* 409, 711-22.

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

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