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TAK1 Antibody

Store at -20C
#4505

For Research Use Only. Not for Use in Diagnostic Procedures.

Applications: W	Reactivity: H M R Mk B	Sensitivity: Endogenous	MW (kDa): 78 to 82	Source/Isotype: Rabbit	UniProt ID: #O43318	Entrez-Gene Id: 6885
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Product Usage Information

Application

Western Blotting

Dilution

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

TAK1 Antibody detects endogenous levels of total TAK1 protein.

Species predicted to react based on 100% sequence homology

Chicken, Xenopus

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy-terminus of human TAK1. Antibodies are purified by protein A and peptide affinity chromatography.

Background

TAK1 is a mitogen-activated protein kinase kinase kinase that can be activated by TGF-β, bone morphogenetic protein, and other cytokines, including IL-1 (1,2). *In vivo* activation of TAK1 requires association with TAK1 binding protein 1 (TAB1), which triggers phosphorylation of TAK1 (3,4). Another adaptor protein, TAB2, links TAK1 with TRAF6 and mediates TAK1 activation upon IL-1 stimulation (5). Once activated, TAK1 phosphorylates MAPK kinases MKK4 and MKK3/6, which activate p38 MAPK and JNK, respectively. In addition, TAK1 activates the NF-κB pathway by interacting with TRAF6 and phosphorylating the NF-κB inducing kinase (NIK) (2).

Background References

1. Yamaguchi, K. et al. (1995) *Science* 270, 2008-11.
2. Ninomiya-Tsuji, J. et al. (1999) *Nature* 398, 252-6.
3. Shibuya, H. et al. (1996) *Science* 272, 1179-82.
4. Sakurai, H. et al. (2000) *FEBS Lett* 474, 141-5.
5. Takaesu, G. et al. (2000) *Mol Cell* 5, 649-58.
6. Onodera, Y. et al. (2015) *FEBS Open Bio* 5, 492-501.

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 nonfat dry milk, 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 **B:** Bovine

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