



# Tak1 Polyclonal Antibody

|                           |                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Catalog No</b>         | BYab-15010                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Isotype</b>            | IgG                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Reactivity</b>         | Human;Mouse;Rat                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Applications</b>       | IF;WB;IHC;ELISA                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Gene Name</b>          | MAP3K7                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Protein Name</b>       | Mitogen-activated protein kinase kinase kinase 7                                                                                                                                                                                                                                                                                                                                                         |
| <b>Immunogen</b>          | The antiserum was produced against synthesized peptide derived from human MAP3K7. AA range:161-210                                                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Tak1 Polyclonal Antibody detects endogenous levels of Tak1 protein.                                                                                                                                                                                                                                                                                                                                      |
| <b>Formulation</b>        | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.                                                                                                                                                                                                                                                                                                                                  |
| <b>Source</b>             | Polyclonal, Rabbit,IgG                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Purification</b>       | The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.                                                                                                                                                                                                                                                                                    |
| <b>Dilution</b>           | IF: 1:50-200 Western Blot: 1/500 - 1/2000. Immunohistochemistry: 1/100 - 1/300. ELISA: 1/40000. Not yet tested in other applications.                                                                                                                                                                                                                                                                    |
| <b>Concentration</b>      | 1 mg/ml                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Purity</b>             | ≥90%                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Storage Stability</b>  | -20°C/1 year                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Synonyms</b>           | MAP3K7; TAK1; Mitogen-activated protein kinase kinase kinase 7; Transforming growth factor-beta-activated kinase 1; TGF-beta-activated kinase 1                                                                                                                                                                                                                                                          |
| <b>Observed Band</b>      | 77kD                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Cell Pathway</b>       | Cytoplasm . Cell membrane ; Peripheral membrane protein ; Cytoplasmic side . Although the majority of MAP3K7/TAK1 is found in the cytosol, when complexed with TAB1/MAP3K7IP1 and TAB2/MAP3K7IP2, it is also localized at the cell membrane.                                                                                                                                                             |
| <b>Tissue Specificity</b> | Isoform 1A is the most abundant in ovary, skeletal muscle, spleen and blood mononuclear cells. Isoform 1B is highly expressed in brain, kidney and small intestine. Isoform 1C is the major form in prostate. Isoform 1D is the less abundant form.                                                                                                                                                      |
| <b>Function</b>           | catalytic activity:ATP + a protein = ADP + a phosphoprotein.,cofactor:Magnesium.,function:Component of a protein kinase signal transduction cascade. Mediator of TGF-beta signal transduction. Stimulates NF-kappa-B activation and the p38 MAPK pathway.,PTM:Association with MAP3K7IP1 promotes autophosphorylation and subsequent activation. Dephosphorylation at Thr-187 by PP2A and PPP6C leads to |

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inactivation.,similarity:Belongs to the protein kinase superfamily.,similarity:Belongs to the protein kinase superfamily. STE Ser/Thr protein kinase family. MAP kinase kinase kinase subfamily.,similarity:Contains 1 protein kinase domain.,subunit:Bindes both upstream activators and downstream substrates in multimolecular complexes. Interacts with MAP3K7IP1 and MAP3K7IP2. Interacts with PPM1L. Interaction with PP2A and PPP6C leads to its' repressed activity.,

**Background**

The protein encoded by this gene is a member of the serine/threonine protein kinase family. This kinase mediates the signaling transduction induced by TGF beta and morphogenetic protein (BMP), and controls a variety of cell functions including transcription regulation and apoptosis. In response to IL-1, this protein forms a kinase complex including TRAF6, MAP3K7P1/TAB1 and MAP3K7P2/TAB2; this complex is required for the activation of nuclear factor kappa B. This kinase can also activate MAPK8/JNK, MAP2K4/MKK4, and thus plays a role in the cell response to environmental stresses. Four alternatively spliced transcript variants encoding distinct isoforms have been reported. [provided by RefSeq, Jul 2008],

**matters needing attention**

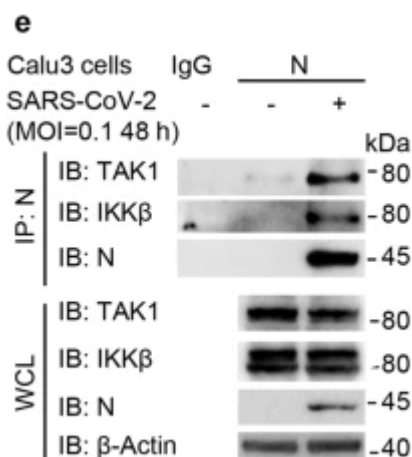
Avoid repeated freezing and thawing!

**Usage suggestions**

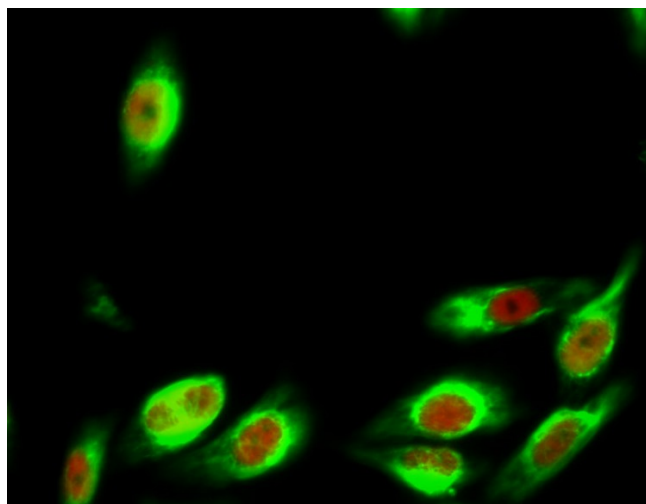
This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



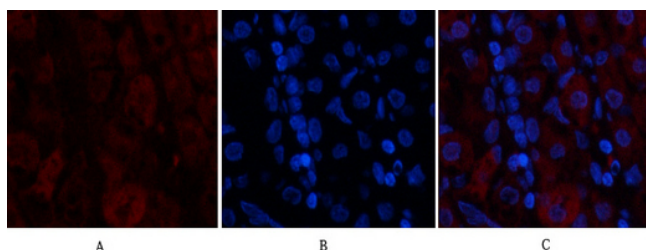
## Products Images



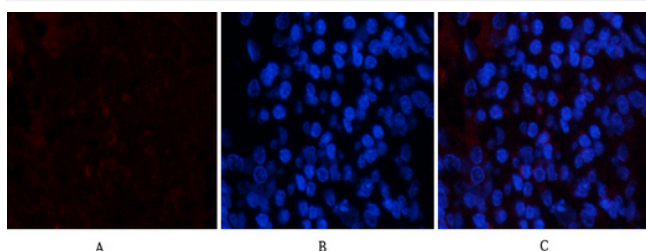
Wu, Y., Ma, L., Cai, S. et al. RNA-induced liquid phase separation of SARS-CoV-2 nucleocapsid protein facilitates NF- $\kappa$ B hyper-activation and inflammation. Sig Transduct Target Ther 6, 167 (2021)



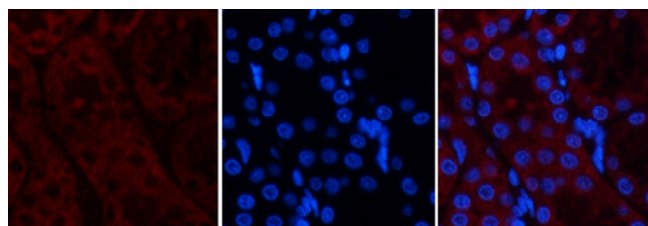
Immunofluorescence analysis of HeLa cell. 1, Tak1 Polyclonal Antibody (red) was diluted at 1:200 (4°C overnight). CK7 Monoclonal Antibody (12D7) (green) was diluted at 1:200 (4°C overnight). 2, Goat Anti Rabbit Alexa Fluor 594 Catalog: RS3611 was diluted at 1:1000 (room temperature, 50min). Goat Anti Mouse Alexa Fluor 488 Catalog: RS3208 was diluted at 1:1000 (room temperature, 50min).



Immunofluorescence analysis of human-stomach tissue. 1, Tak1 Polyclonal Antibody (red) was diluted at 1:200 (4°C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50min). 3, Picture B: DAPI (blue) 10min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B



Immunofluorescence analysis of human-stomach tissue. 1, Tak1 Polyclonal Antibody (red) was diluted at 1:200 (4°C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50min). 3, Picture B: DAPI (blue) 10min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B



A

B

C

Immunofluorescence analysis of rat-kidney tissue.  
1, Tak1 Polyclonal Antibody (red) was diluted at 1:200 (4 °C, overnight). 2, Cy3 labeled Secondary antibody was diluted at 1:300 (room temperature, 50 min). 3, Picture B: DAPI (blue) 10 min. Picture A: Target. Picture B: DAPI. Picture C: merge of A+B