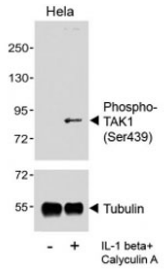
Phospho-TAK1 Antibody (Ser439) (F54074)

Catalog No.	Formulation	Size
F54074-0.05ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.05 ml

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Predicted Reactivity	Rat
Format	Antigen affinity purified
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
UniProt	O43318
Applications	Western Blot : 1:1000
Limitations	This phospho-TAK1 antibody is available for research use only.



Western blot analysis of lysates from the human HeLa cell line, untreated or treated with IL-1beta (20 ng/ml) + Calyculin A(100 nM), using phospho-TAK1 antibody (upper) or Tubulin Ab (lower).

Description

TAK1 / MAP3K7 is a serine/threonine kinase which acts as an essential component of the MAP kinase signal transduction pathway. Plays an important role in the cascades of cellular responses evoked by changes in the environment. Mediates signal transduction of TRAF6, various cytokines including interleukin-1 (IL-1), transforming growth factor-beta (TGFB), TGFB-related factors like BMP2 and BMP4, toll-like receptors (TLR), tumor necrosis factor receptor CD40 and B-cell receptor (BCR). Ceramides are also able to activate MAP3K7/TAK1. Once activated, acts as an upstream activator of the MKK/JNK signal transduction cascade and the p38 MAPK signal transduction cascade through the phosphorylation and activation of several MAP kinase kinases like MAP2K1/MEK1, MAP2K3/MKK3, MAP2K6/MKK6 and MAP2K7/MKK7. These MAP2Ks in turn activate p38 MAPKs, c-jun N-terminal kinases (JNKs) and I-kappa-B kinase complex (IKK). Both

p38 MAPK and JNK pathways control the transcription factors activator protein-1 (AP-1), while nuclear factor-kappa B is activated by IKK. MAP3K7 activates also IKBKB and MAPK8/JNK1 in response to TRAF6 signaling and mediates BMP2-induced apoptosis. In osmotic stress signaling, plays a major role in the activation of MAPK8/JNK1, but not that of NF-kappa-B. Promotes TRIM5 capsid-specific restriction activity. [UniProt]

Application Notes

The stated application concentrations are suggested starting points. Titration of the phospho-TAK1 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

Amino acids surrounding phosphorylated serine 439 from the human TAK1 were used as the immunogen for the phospho-TAK1 antibody.

Storage

Aliquot the phospho-TAK1 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.