

Recombinant Human TAOK2 Protein (M1-K314), Tag Free

Cat. No. TAOK2-1117H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human TAOK2(M1-K314) Protein was expressed in Insect cell.
Species	Human
Source	Insect Cells
ProteinLength	M1-K314
Description	Serine/threonine-protein kinase involved in different processes such as membrane blebbing and apoptotic bodies formation DNA damage response and MAPK14/p38 MAPK stress-activated MAPK cascade. Phosphorylates itself, MBP, activated MAPK8, MAP2K3, MAP2K6 and tubulins. Activates the MAPK14/p38 MAPK signaling pathway through the specific activation and phosphorylation of the upstream MAP2K3 and MAP2K6 kinases. In response to DNA damage, involved in the G2/M transition DNA damage checkpoint by activating the p38/MAPK14 stress-activated MAPK cascade, probably by mediating phosphorylation of upstream MAP2K3 and MAP2K6 kinases. Isoform 1, but not isoform 2, plays a role in apoptotic morphological changes, including cell contraction, membrane blebbing and apoptotic bodies formation. This function, which requires the activation of MAPK8/JNK and nuclear localization of C-terminally truncated isoform 1, may be linked to the mitochondrial CASP9-associated death pathway. Isoform 1 binds to microtubules and affects their organization and stability independently of its kinase activity. Prevents MAP3K7-mediated activation of CHUK, and thus NF-kappa-B activation, but not that of MAPK8/JNK. May play a role in the osmotic stress-MAPK8 pathway. Isoform 2, but

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not isoform 1, is required for PCDH8 endocytosis. Following homophilic interactions between PCDH8 extracellular domains, isoform 2 phosphorylates and activates MAPK14/p38 MAPK which in turn phosphorylates isoform 2. This process leads to PCDH8 endocytosis and CDH2 cointernalization. Both isoforms are involved in MAPK14 phosphorylation.

Form	Liquid
Endotoxin	< 0.01 EU per µg of the protein
Purity	90%
Stability	Samples are stable for up to twelve months from date of receipt at -20 to -80 centigrade.
Storage	Store it under sterile conditions at -20 to -80 centigrade. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Storage Buffer	Supplied as sterile 50 mM Tris-HCl (pH7.5), 200 mM NaCl, 20% glycerol
Shipping	It is shipped out with blue ice.

GENE INFORMATION

Gene Name	TAOK2 TAO kinase 2 [Homo sapiens (human)]
Official Symbol	TAOK2
Synonyms	TAOK2; TAO kinase 2; serine/threonine-protein kinase TAO2; KIAA0881; MAP3K17; PSK; PSK1; TAO1; TAO2; PSK-1; hKFC-C; kinase from chicken homolog C; prostate-derived STE20-like kinase 1; prostate derived STE20-like kinase PSK;

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prostate-derived sterile 20-like kinase 1; thousand and one amino acid protein kinase 2; PSK1-BETA;

Gene ID 9344

mRNA Refseq NM_001252043

Protein Refseq NP_001238972

MIM 613199

UniProt ID Q9UL54

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