

Recombinant HIPK2 (1-640) protein

Catalog No: 81355, 81755

Expressed In: Baculovirus

Quantity: 50, 1000 µg

Concentration: 0.35 µg/µl

Source: Human

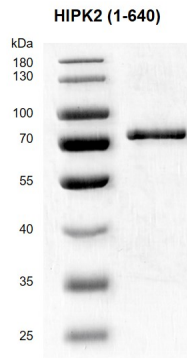
Buffer Contents: Recombinant HIPK2 (1-640) protein is supplied in 25 mM HEPES-NaOH pH 7.5, 500 mM NaCl, 10% glycerol, 0.04% Triton X-100, and 0.5 mM TCEP.

Background: HIPK2 (Homeodomain Interacting Protein Kinase 2) is a conserved serine/threonine kinase that involved in transcription regulation, p53/TP53-mediated cellular apoptosis and regulation of the cell cycle. It acts as a corepressor of several transcription factors, including SMAD1 and POU4F1/Brn3a and probably NK homeodomain transcription factors. HIPK2 phosphorylates PDX1, ATF1, PML, p53/TP53, CREB1, CTBP1, CBX4, RUNX1, EP300, CTNNB1, HMGA1 and ZBTB4. It inhibits cell growth and promotes apoptosis through the activation of p53/TP53 both at the transcription level and at the protein level (by phosphorylation and indirect acetylation), the phosphorylation of p53/TP53 may be mediated by a p53/TP53-HIPK2-AXIN1 complex.

Protein Details: Recombinant HIPK2 (1-640) protein that includes amino acids 1-640 of human HIPK2 protein (accession number NP_001106710.1) was expressed in a baculovirus expression system, and contains an N-terminal FLAG tag. The molecular weight of the protein is 69.5 kDa.

Application Notes: This product was manufactured as described in Protein Details. Where possible, Active Motif has developed functional or activity assays for recombinant proteins. Additional characterization such as enzyme kinetic activity assays, inhibitor screening or other biological activity assays may not have been performed for every product. All available data this product is shown.

Storage and Guarantee: Recombinant proteins in solution are temperature sensitive and must be stored at -80°C to prevent degradation. Avoid repeated freeze/thaw cycles and keep on ice when not in storage. This product is for research use only and is not for use in diagnostic procedures. This product is guaranteed for 6 months from date of arrival.

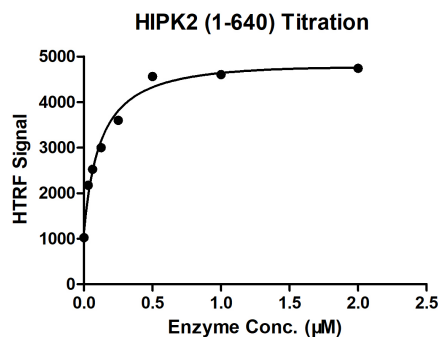


Recombinant HIPK2 (1-640) protein

10% SDS-PAGE with Coomassie staining

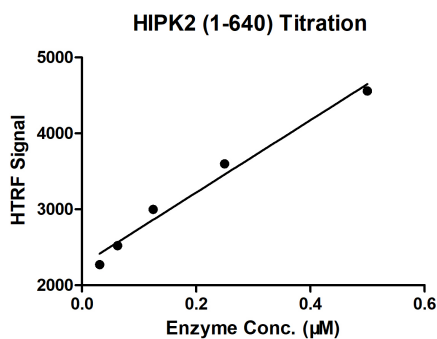
MW: 69.5 kDa

Purity: >95%



HTRF assay for HIPK2 (1-640) activity

1 µM STK S3 substrate was incubated with different concentrations of HIPK2 (1-640) protein in a 10 µl reaction system containing 1×Enzymatic Buffer, 5 mM MgCl₂, 1 mM DTT and 100 µM ATP for 1 hour. The 10 µl detection reagents containing STK antibody (1:2) and SA-XL665 (1:100) diluted with 1× Detection Buffer were added and incubated with the reactions for 30 min. All the operations and reactions were performed at room temperature. HTRF assay was used for detection.



HTRF assay for HIPK2 (1-640) activity

1 µM STK S3 substrate was incubated with different concentrations of HIPK2 (1-640) protein in a 10 µl reaction system containing 1×Enzymatic Buffer, 5 mM MgCl₂, 1 mM DTT and 100 µM ATP for 1 hour. The 10 µl detection reagents containing STK antibody (1:2) and SA-XL665 (1:100) diluted with 1× Detection Buffer were added and incubated with the reactions for 30 min. All the operations and reactions were performed at room temperature. HTRF assay was used for detection.