

Recombinant NUAK1 (ARK5) protein

Catalog No: 81331, 81631

Expressed In: Baculovirus

Quantity: 20, 1000 µg

Concentration: 0.25 µg/µl

Source: Human

Buffer Contents: Recombinant NUAK1 / ARK5 protein is supplied in 25 mM HEPES-NaOH pH 7.5, 300 mM NaCl, 10% glycerol, 0.04% Triton X-100, and 0.5 mM TCEP

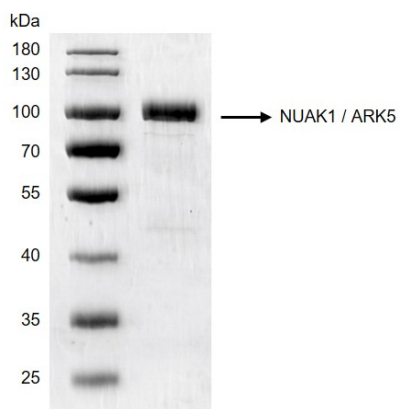
Background: NUAK1, also known as ARK5, is the fifth member of the AMPK catalytic subunit family. It is a serine/threonine-protein kinase that are activated by phosphorylation at its Ser600 by Akt, which has been reported to be a key player in tumor malignancy. The activated NUAK1 involves in various processes such as cell adhesion, regulation of cell ploidy and senescence, cell proliferation and tumor progression, such as it acts as a regulator of cellular senescence and cellular ploidy by mediating phosphorylation of 'Ser-464' of LATS1, and Controls cell adhesion by regulating activity of the myosin protein phosphatase 1 (PP1) complex. Which also involves in DNA damage response by phosphorylating p53/ TP53 at 'Ser-15' and 'Ser-392', and it is a sensitive indicator of cellular energy status and have been found to promote tumor cell survival during nutrient starvation.

Protein Details: Recombinant NUAK1 / ARK5 protein was expressed in a baculovirus expression system as the full length protein (accession number NP_055655.1) with a C-terminal FLAG tag. The molecular weight of the protein is 76 kDa.

Application Notes: Recombinant NUAK1 / ARK5 protein is suitable for use in enzyme kinetics, inhibitor screening, and selectivity profiling.

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.

NUAK1 / ARK5



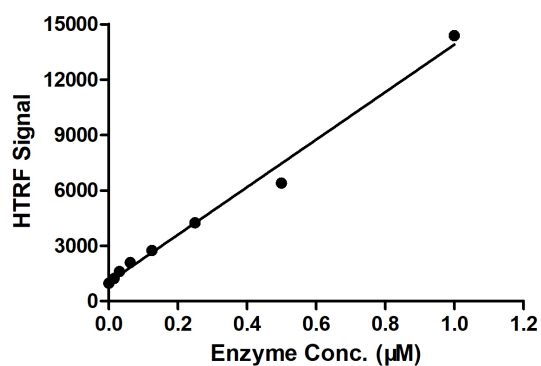
Recombinant NUAK1 / ARK5 protein gel

10% SDS-PAGE with Coomassie blue staining

MW: 76 kDa

Purity: >95%

NUAK1 / ARK5 Titration



HTRF assay for NUAK1 / ARK5 activity

1 μM STK S3 substrate was incubated with different concentrations of NUAK1 / ARK5 protein in 10 μl reaction system containing 1 \times Enzymatic Buffer, 5 mM MgCl_2 , 1 mM DTT, and 100 μM ATP for 1 hour. The 10 μl detection reagents containing anti-STK antibody (1:2) and SA-XL665 (1:100) diluted with 1 \times 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.