Recombinant PRPK protein (His tag)

Catalog Number	541074
Synonyms	Atypical serine/threonine protein kinase TP53RK; Nori-2; TP53-regulating kinase; p53-related protein kinase
Species	Human
Expression System	E. coli
Accession	Q96S44
Molecular Weight	Predictes a molecular mass of 29.81 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 30 kDa band.

Product Information

Sequence Region	1-253
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 1-253 aa (Q96S44) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human TP53RK (EKC/KEOPS complex subunit TP53RK) protein fragment (amino acids 1-253) is a high-purity, functional protein encompassing the complete protein kinase domain. This product is an essential tool for investigating the kinase activity, tRNA modification roles, and p53-related signaling pathways in a controlled in vitro setting. TP53RK is a multifunctional protein that serves as a component of the EKC/KEOPS complex, which is required for the formation of a threonylcarbamoyl group at adenosine 37 (t(6)A37) in tRNAs that decode codons beginning with adenine, a critical process for translational fidelity. Within this complex, TP53RK exhibits ATPase activity and supports the catalytic functions of OSGEP. Additionally, TP53RK acts as an atypical serine/threonine protein kinase that phosphorylates p53 at Ser-15, potentially contributing to p53 activation and its role in cellular stress responses. The protein localizes to both the cytoplasm and nucleus, reflecting its diverse functions in tRNA modification and nuclear signaling pathways.