Recombinant EXD2 protein (His tag)

Catalog Number	543747
Synonyms	3'-5' exoribonuclease EXD2; Exonuclease 3'-5' domain-like-containing protein 2
Species	Human
Expression System	E. coli
Accession	Q9NVH0
Molecular Weight	Predictes a molecular mass of 26.72 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 27 kDa band.

Product Information

Sequence Region	69-293
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>89%, 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 69-293 aa (Q9NVH0) 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 EXD2 (Exonuclease 3'-5' domain-containing protein 2) Fragment (aa 69-293) is a high-purity protein encompassing the 3'-5' exonuclease domain. This fragment retains key enzymatic activities, including metal-dependent exoribonuclease and exodeoxyribonuclease functions, making it an ideal tool for studying DNA damage response, mitochondrial regulation, and homologous recombination mechanisms in vitro. The full-length EXD2 protein is a versatile exonuclease with dual 3'-5' exoribonuclease and exodeoxyribonuclease activities, regulated by divalent metal cofactors (Mg^{2+} or Mn^{2+}). In mitochondria, it modulates ATP production and translation, while in the nucleus, it plays critical roles in DNA repair—facilitating double-strand break resection via homologous recombination and stabilizing replication forks during replicative stress. EXD2 localizes primarily to the mitochondrial outer membrane but translocates to chromatin and nuclei upon DNA damage, where it interacts with the MRN complex to accelerate resection. Its involvement in key genomic stability pathways underscores its significance in cellular health and disease research.