Recombinant FOXK2 protein (His tag)

Catalog Number	540159
Synonyms	G/T-mismatch specific binding protein; nGTBP; Interleukin enhancer-binding factor 1
Species	Human
Expression System	E. coli
Accession	Q01167
Molecular Weight	Predictes a molecular mass of 14.95 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 15 kDa band.

Product Information

Sequence Region	36-158
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, 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 36-158 aa (Q01167) 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 FOXK2 Fragment (36-158) is a high-purity protein designed for studying the FHA domain of Forkhead box protein K2. This fragment serves as an essential tool for researchers investigating transcriptional regulation, metabolic reprogramming, and DNA mismatch binding mechanisms. Forkhead box protein K2 (FOXK2) is a multifunctional transcriptional regulator in humans, involved in critical processes such as glucose metabolism, aerobic glycolysis, and autophagy. It recognizes and binds the forkhead DNA sequence motif (5'-GTAAACA-3') and can act as either a transcription activator or repressor depending on cellular context. FOXK2 plays a key role in metabolic reprogramming by promoting glycolysis enzymes while suppressing mitochondrial pyruvate oxidation. It also functions as a negative regulator of autophagy in skeletal muscle and positively regulates WNT/β-catenin signaling by translocating DVL proteins into the nucleus. Additionally, FOXK2 binds to G/T-mismatch DNA sequences, NFAT-like motifs in the IL2 promoter, and serves as an accessory component of the polycomb repressive deubiquitinase complex. The protein primarily localizes to the nucleus, with some evidence of cytoplasmic presence.