Recombinant DUX4 protein (His tag)

Catalog Number	548452
Synonyms	Double homeobox protein 10
Species	Human
Expression System	E. coli
Accession	Q9UBX2
Molecular Weight	Predictes a molecular mass of 19.16 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 19 kDa band.

Product Information

Sequence Region	1-151
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 1-151 aa (Q9UBX2) 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 Double Homeobox Protein 4 (DUX4) Fragment (aa 1-151) is a high-purity, stable protein designed for structural and biochemical studies. This fragment represents a soluble and well-folded region of the transcription factor DUX4, enabling research into its DNA-binding properties and regulatory mechanisms in early embryonic development and disease contexts. Double homeobox protein 4 (DUX4), encoded by the DUX4 gene in humans, is a transcription factor transiently expressed in cleavage-stage embryos. It binds to double-stranded DNA with the consensus sequence 5'-TAATCTAATCA-3' and dynamically regulates histone H3 acetylation at Lys-27 (H3K27ac), either promoting deacetylation or recruiting EP300 and CREBBP to acetylate new sites. DUX4 primarily acts as a transcriptional activator, driving expression of key embryonic genes such as ZSCAN4 and KDM4E, and can promote nuclear translocation of CTNNB1/β-catenin. It also regulates HERVL retrotransposons, satellite repeats, and microRNAs. Inappropriate expression of DUX4 inhibits myogenesis and promotes apoptosis, linking it to developmental and disease processes. Isoform 1 localizes to the nucleus and cytoplasm, with active nuclear transport, while the recombinant fragment (aa 1-151) provides a stable unit for investigating these functions without the full-length protein's complexity.