Recombinant CHD8 protein (His tag)

Catalog Number	545997
Synonyms	CHD-8; ATP-dependent helicase CHD8; Helicase with SNF2 domain 1
Species	Human
Expression System	E. coli
Accession	Q9HCK8
Molecular Weight	Predictes a molecular mass of 21.54 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 23 kDa band.

Product Information

Sequence Region	1798-1965
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 1798-1965 aa (Q9HCK8) 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	Introducing the recombinant Chromodomain-helicase-DNA-binding protein 8 (CHD-8) fragment (residues 1798-1965), a highly stable and soluble 168-amino acid unit ideal for structural and biochemical studies. This fragment, derived from the human ATP-dependent chromatin-remodeling factor, enables researchers to investigate CHD-8's role in nucleosome sliding and transcriptional regulation without the complexities of the full-length protein. CHD-8 is an ATP-dependent chromatin-remodeling factor in humans that slides nucleosomes along DNA, functioning as both a transcription repressor and activator. It represses transcription by remodeling chromatin and recruiting histone H1 to target genes, such as suppressing p53-mediated apoptosis and negatively regulating Wnt signaling by modulating beta-catenin activity at gene promoters. CHD-8 also facilitates enhancer blocking and epigenetic remodeling through interactions with CTCF, suppresses STAT3 activity, and activates transcription via ZNF143 in U6 RNA polymerase III processes. Additionally, it regulates alternative splicing in neuronal differentiation and enables H3K36me3-coupled transcription elongation by interacting with HNRNPL. Located in the nucleus, CHD-8 localizes to promoter regions of CTNNB1-responsive genes and CTCF target sites, underscoring its critical role in gene expression and chromatin organization.