Recombinant CDYL protein (His tag)

Catalog Number	541571
Synonyms	CDY-like; Crotonyl-CoA hydratase
Species	Human
Expression System	E. coli
Accession	Q9Y232
Molecular Weight	Predictes a molecular mass of 30.54 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 31 kDa band.

Product Information

Sequence Region	340-598
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 340-598 aa (Q9Y232) 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 CDY-like protein (CDYL) fragment (residues 340-598) is a highly purified, stable protein product designed for chromatin biology and epigenetic research. This 259-amino acid fragment, derived from the Homo sapiens Chromodomain Y-like protein, is optimized for structural and biochemical studies, offering researchers a reliable tool to investigate histone modification recognition and chromatin remodeling mechanisms. The full-length Chromodomain Y-like protein (CDYL) is a multifunctional human protein that serves as both a chromatin reader and a hydro-lyase enzyme. As a chromatin reader, isoform 2 recognizes and binds repressive histone marks including H3K9me3, H3K27me2, and H3K27me3, participating in multimeric repressive chromatin complexes and facilitating the transmission of epigenetic information. It enhances Polycomb repressive complex 2 (PRC2) activity by bridging pre-existing H3K27me3 with newly recruited PRC2, and functions as a corepressor for REST by recruiting histone methyltransferase EHMT2. Additionally, CDYL exhibits crotonyl-CoA hydratase activity, converting crotonyl-CoA to beta-hydroxybutyryl-CoA, thereby negatively regulating histone crotonylation - a modification crucial during spermatogenesis. The protein localizes to the nucleus and chromosomes, with multimerization required for chromatin binding, and is recruited to DNA double-strand breaks in a PARP1-dependent manner to facilitate DNA damage response and repair processes.