Recombinant CLOCK protein (His tag)

Catalog Number	531463
Synonyms	dCLOCK; dPAS1
Species	Drosophila melanogaster
Expression System	E. coli
Accession	O61735
Gene ID	38872
Molecular Weight	Predictes a molecular mass of 24.93 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 26 kDa band.

Product Information

Sequence Region	1-201
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 1-201 aa (O61735) 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 Drosophila melanogaster Circadian locomoter output cycles protein kaput (dCLOCK) fragment (amino acids 1-201), encompassing the essential bHLH and PAS 1 domains. This high-quality protein is ideal for investigating circadian rhythm regulation and transcription factor mechanisms in fruit fly models. Circadian locomoter output cycles protein kaput (dCLOCK) is a crucial circadian regulator in Drosophila melanogaster, functioning as a transcription factor that generates 24-hour rhythmic outputs. The protein oscillates in antiphase to period (PER) and timeless (TIM) proteins, with peak abundance occurring around the dark-light transition. dCLOCK forms heterodimers with cycle proteins that activate transcription of PER and TIM by binding to E-box promoter elements (5'-CACGTG-3'). Once induced, PER and TIM subsequently block dCLOCK's transactivation ability, creating a feedback loop essential for circadian rhythm maintenance. The protein is localized exclusively in the nucleus, consistent with its role as a transcription factor.