Recombinant CBX3 protein (His tag)

Catalog Number	540243
Synonyms	HECH; Heterochromatin protein 1 homolog gamma; HP1 gamma; Modifier 2 protein
Species	Human
Expression System	E. coli
Accession	Q13185
Molecular Weight	Predictes a molecular mass of 9.74 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 11 kDa band.

Product Information

Sequence Region	113-183
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 113-183 aa (Q13185) 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 our high-quality recombinant Chromobox protein homolog 3 (CBX3) fragment (amino acids 113-183), specifically engineered to encompass the complete Chromo 2 shadow domain. This carefully designed fragment provides researchers with an ideal tool for investigating the specific molecular functions of heterochromatin protein 1 homolog gamma in epigenetic regulation and chromatin organization. Chromobox protein homolog 3 (CBX3), also known as Heterochromatin protein 1 homolog gamma (HP1 gamma), is a crucial epigenetic regulator involved in transcriptional silencing through heterochromatin-like complexes. The full-length protein recognizes and binds histone H3 tails methylated at Lys-9, leading to epigenetic repression and contributing to the formation of functional kinetochores through interaction with MIS12 complex proteins. CBX3 mediates the recruitment of methyltransferases SUV39H1 and/or SUV39H2 to circadian target genes and facilitates the association of heterochromatin with the inner nuclear membrane via interaction with lamin B receptor. Located primarily in the nucleus, CBX3 associates with euchromatin while being largely excluded from constitutive heterochromatin, playing a vital role in converting local chromatin to a heterochromatin-like repressive state through H3 Lys-9 trimethylation.