Recombinant CBX5 protein (His tag)

Catalog Number	537747
Synonyms	Antigen p25; Heterochromatin protein 1 homolog alpha; HP1 alpha
Species	Human
Expression System	E. coli
Accession	P45973
Molecular Weight	Predictes a molecular mass of 10.47 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 12 kDa band.

Product Information

Sequence Region	115-191
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, 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 115-191 aa (P45973) 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 Chromobox protein homolog 5 (CBX5) fragment (amino acids 115-191), a high-purity protein designed for studying heterochromatin formation and epigenetic regulation. This fragment specifically contains the Chromo 2 (shadow subtype) domain, making it an ideal tool for investigating histone H3K9me binding and its role in chromatin organization and centromere function. Chromobox protein homolog 5 (CBX5), also known as HP1 alpha, is a key component of heterochromatin that recognizes and binds histone H3 tails methylated at Lys-9 (H3K9me), leading to epigenetic repression. It is excluded from chromatin when histone H3 Tyr-41 is phosphorylated. CBX5 contributes to heterochromatin association with the inner nuclear membrane through interactions with the lamin-B receptor and is involved in kinetochore formation via interaction with the MIS12 complex subunit NSL1. It is essential for inner centromere formation and localizes to the nucleus, chromosomes (particularly centromeres and pericentromeric heterochromatin), and sites of DNA damage, playing critical roles in chromatin organization and genomic stability during cell division.