Recombinant SATB2 protein (His tag)

Catalog Number	548528
Synonyms	Special AT-rich sequence-binding protein 2
Species	Human
Expression System	E. coli
Accession	Q9UPW6
Molecular Weight	Predictes a molecular mass of 21.65 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 22 kDa band.

Product Information

Sequence Region	58-234
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 58-234 aa (Q9UPW6) 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 human DNA-binding protein SATB2 fragment (amino acids 58-234), a specialized tool for investigating the CUTL domain's role in chromatin remodeling and transcriptional regulation. This precisely engineered fragment enables focused studies on nuclear matrix interactions and gene expression control in developmental and skeletal research. SATB2 (Special AT-rich sequence-binding protein 2) is a crucial transcription factor that binds to matrix attachment regions (MARs) of DNA, facilitating local chromatin-loop remodeling and serving as a docking platform for chromatin remodeling enzymes. Located in the nuclear matrix, it recruits both corepressors (HDACs) and coactivators (HATs) to regulatory elements, thereby modulating nuclear gene expression. SATB2 plays essential roles in neuronal differentiation by initiating upper-layer neuron genetic programs and repressing deep-layer genes, potentially through BCL11B regulation. It also functions as a key determinant in corticocortical connections during cerebral cortex development and serves as a molecular node in transcriptional networks governing skeletal development and osteoblast differentiation, with additional implications in palate formation.