Recombinant SIX1 protein (His tag)

Catalog Number	547347
Synonyms	Sine oculis homeobox homolog 1
Species	Human
Expression System	E. coli
Accession	Q15475
Molecular Weight	Predictes a molecular mass of 24.05 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 24 kDa band.

Product Information

Sequence Region	1-191
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 1-191 aa (Q15475) 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 Homeobox protein SIX1 (Sine oculis homeobox homolog 1) fragment (amino acids 1-191) is a high-quality, stable protein designed for structural and biochemical studies. This fragment, derived from the human SIX1 gene, represents a soluble unit ideal for investigating the transcriptional regulation mechanisms of this key developmental protein. Homeobox protein SIX1 is a crucial transcription factor involved in regulating cell proliferation, apoptosis, and embryonic development. It plays essential roles in the development of multiple organs including kidney, muscle, and inner ear. SIX1 functions as either a transcriptional repressor or activator depending on cellular context, requiring interaction with EYA family members for transcriptional activation. It binds to specific DNA motifs (5'-TCA[AG][AG]TTNC-3') present in promoters such as MYOG and CIDEA, and regulates numerous genes including MYC, CCND1, and EZR. The protein localizes primarily to the nucleus, with some cytoplasmic presence, and mediates nuclear translocation of EYA family members. SIX1 is particularly significant in myogenesis and brown adipocyte differentiation processes.