Recombinant UNC4 protein (His tag)

Catalog Number	532629
Synonyms	Homeobox protein ceh-4; Uncoordinated protein 4
Species	Caenorhabditis elegans
Expression System	E. coli
Accession	P29506
Gene ID	174544
Molecular Weight	Predictes a molecular mass of 12.89 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 14 kDa band.

Product Information

Sequence Region	88-181
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 88-181 aa (P29506) 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 Homeobox protein unc-4 fragment (residues 88-181) from Caenorhabditis elegans, representing a stable and soluble unit ideal for structural biology and biochemical studies of this crucial transcription factor involved in motor neuron fate determination. Homeobox protein unc-4 is a transcription factor essential for motor neuron fate determination and maintenance in Caenorhabditis elegans. It functions in concert with unc-37 to repress VB-specific gene expression, thereby preventing the adoption of VB motor neuron fate. The protein regulates synaptic specificity and patterns of synaptic input to VA motor neurons, acting in opposition to or supported by Wnt signaling depending on context. UNC-4 serves as a transcriptional repressor that counteracts gene activation by transcription factor unc-3 in specific motor neuron subsets, likely through binding to specific promoter elements. Importantly, it has no role in axonal guidance or outgrowth. The protein localizes to the nucleus, consistent with its function as a DNA-binding transcription factor. This recombinant fragment was computationally selected to provide a stable, soluble unit suitable for detailed structural and functional analyses.