# Recombinant HEN2 protein (His tag)

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| **Catalog Number** | 540167 |
| **Synonyms** | HEN-2; Class A basic helix-loop-helix protein 34; bHLHa34; Nescient helix loop helix 2; NSCL-2 |
| **Species** | Human |
| **Expression System** | E. coli |
| **Accession** | Q02577 |
| **Molecular Weight** | Predictes a molecular mass of 10.46 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 10 kDa band. |

## Product Information

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| **Sequence Region** | 62-135 |
| **Form** | Lyophilized powder |
| **Formulation** | Lyophilized from sterile PBS, pH 7.4 |
| **Purity** | >85%, 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 62-135 aa (Q02577) were fused with 6His tag. |

## Storage & Handling

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| **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.<br>Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise. |

## Description

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| **Description** | This product is a recombinant protein fragment of Helix-loop-helix protein 2 (HEN-2), encompassing amino acids 62-135, which includes the complete basic helix-loop-helix (bHLH) domain. It is an essential tool for researchers studying transcriptional regulation, energy metabolism, and neurodevelopmental processes, offering a focused approach to investigate domain-specific functions.<br>Helix-loop-helix protein 2 (HEN-2), encoded by the NHLH2 gene in Homo sapiens, is a transcription factor that binds to the E-box motif 5'-CA[TC][AG]TG-3'. It plays a critical role in regulating energy expenditure, body mass, voluntary physical activity, mating behavior, and reproductive longevity through the hypothalamic-pituitary-gonadal axis. As a transcriptional activator, it targets genes such as NDN, PCSK1, MC4R, and KISS1, influencing processes like adipose tissue function and neuronal development. In conjunction with NHLH1, it supports the migration and survival of cells in the anterior extramural migration stream, contributing to precerebellar nuclei formation, and may help determine the fate of gonadotropin-releasing hormone-1 (GnRH-1) neurons. The protein is localized to the nucleus, consistent with its role in gene expression regulation. |