# Recombinant CNTD1 protein (His tag)

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| **Catalog Number** | 550962 |
| **Species** | Human |
| **Expression System** | E. coli |
| **Accession** | Q8N815 |
| **Molecular Weight** | Predictes a molecular mass of 38.58 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 39 kDa band. |

## Product Information

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| **Sequence Region** | 1-330 |
| **Form** | Lyophilized powder |
| **Formulation** | Lyophilized from sterile PBS, pH 7.4 |
| **Purity** | >90%, 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 1-330 aa (Q8N815) 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** | Recombinant Human Cyclin N-terminal domain-containing protein 1 (CNTD1) fragment (residues 1-330) is a high-purity protein designed for investigating meiotic recombination and cell-cycle regulation. This fragment fully encompasses the functional Cyclin N-terminal domain, making it an ideal tool for domain-specific functional studies, including protein interactions and crossover formation mechanisms.<br>CNTD1 is a human protein critical for meiotic recombination, where it facilitates crossover formation through interactions with partners like PRR19, RFC3, and RFC4. It contributes to the differentiation of crossover-specific intermediates and helps regulate cell-cycle progression by interacting with CDC34 to promote WEE1 ubiquitination. Additionally, CNTD1 may assist in deselecting excess pre-crossover intermediates. The protein localizes to the nucleus, cytoplasm, and chromosomes, shuttling between the nucleus and cytoplasm in a stage-specific manner during prophase I, and it co-localizes with PRR19 at crossover sites, underscoring its role in genetic recombination and cellular division processes. |