Recombinant NGDN protein (His tag)

Catalog Number	545477
Synonyms	Centromere accumulated nuclear protein 1; CANu1; EIF4E-binding protein
Species	Human
Expression System	E. coli
Accession	Q8NEJ9
Molecular Weight	Predictes a molecular mass of 14.78 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 15 kDa band.

Product Information

Sequence Region	2-121
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, 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 2-121 aa (Q8NEJ9) 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 Neuroguidin (NGDN) Fragment (aa 2-121) is a high-quality protein product designed for structural and biochemical studies. This 120-amino acid fragment represents a stable and soluble unit of Neuroguidin, also known as Centromere accumulated nuclear protein 1 (CANu1) or EIF4E-binding protein, which plays key roles in ribosome biogenesis and mRNA translation regulation. Neuroguidin (NGDN) is part of the small subunit (SSU) processome, serving as the first precursor of the small eukaryotic ribosomal subunit. During SSU processome assembly in the nucleolus, it associates with nascent pre-rRNA and contributes to RNA folding, modifications, rearrangements, cleavage, and targeted degradation by the RNA exosome. Its dissociation marks the transition from state pre-A1 to pre-A1* during ribosomal maturation. Additionally, Neuroguidin inhibits mRNA translation in a cytoplasmic polyadenylation element (CPE)-dependent manner. The protein localizes to multiple cellular compartments including the nucleus (particularly the nucleolus), centromeres, cytoplasm, and various neuronal projections such as axons, dendrites, and filopodia, where it colocalizes with EIF4E. It also translocates from nucleoli to nuclear foci in response to UV damage, indicating its dynamic cellular distribution and potential roles in stress response.