Recombinant SEN2 protein (His tag)

Catalog Number	545465
Synonyms	tRNA-intron endonuclease Sen2; HsSen2
Species	Human
Expression System	E. coli
Accession	Q8NCE0
Molecular Weight	Predictes a molecular mass of 26.51 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 27 kDa band.

Product Information

Sequence Region	255-465
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>88%, 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 255-465 aa (Q8NCE0) 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 tRNA-splicing endonuclease subunit Sen2 (TSEN2) fragment (residues 255-465) is a highly stable and soluble protein unit ideal for structural biology and enzymatic studies. This fragment, derived from the catalytic subunit of the tRNA-splicing endonuclease complex, retains key features for investigating RNA processing mechanisms and offers a reliable tool for biochemical assays. The full-length tRNA-splicing endonuclease subunit Sen2 (TSEN2) is a critical catalytic component of the tRNA-splicing endonuclease complex in humans, responsible for the precise identification and cleavage of splice sites in pre-tRNA. This enzyme cleaves pre-tRNA at both the 5'- and 3'-splice sites, releasing introns and generating tRNA half-molecules with 2',3'-cyclic phosphate and 5'-OH termini. Notably, the complex functions without conserved splice site sequences, relying instead on structural features of the tRNA. Isoform 1 is believed to harbor the active site for 5'-splice site cleavage and is involved in mRNA processing through interactions with pre-mRNA 3'-end processing factors, linking tRNA splicing to mRNA maturation. Subcellularly, Sen2 localizes to the nucleus and may transiently reside in the nucleolus, underscoring its role in nuclear RNA metabolism. The selected fragment (255-465) was designed based on computational predictions to ensure stability and solubility, facilitating research into the protein's structural and functional properties.