Recombinant PRP19 protein (His tag)

Catalog Number	546237
Synonyms	Nuclear matrix protein 200; PRP19/PSO4 homolog; hPso4; RING-type E3 ubiquitin transferase PRP19; Senescence evasion factor
Species	Human
Expression System	E. coli
Accession	Q9UMS4
Molecular Weight	Predictes a molecular mass of 16.45 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 16 kDa band.

Product Information

Sequence Region	2-133
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>86%, 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 2-133 aa (Q9UMS4) 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 Pre-mRNA-processing factor 19 (PRPF19) U-box domain fragment (residues 2-133) from Homo sapiens. This high-purity fragment encompasses the complete U-box domain, a key functional region involved in ubiquitin ligase activity, making it an ideal tool for studying E3 ubiquitin transfer mechanisms, spliceosome regulation, and DNA damage response pathways in targeted research applications. Pre-mRNA-processing factor 19 (PRPF19) is a multifunctional RING-type E3 ubiquitin transferase that serves as a core component in several complexes primarily involved in pre-mRNA splicing and DNA repair. As part of the PRP19C complex, it plays an essential role in spliceosome assembly, remodeling, and activity by mediating 'Lys-63'-linked polyubiquitination of spliceosomal proteins like PRPF3, thereby stabilizing the U4/U5/U6 tri-snRNP complex. Additionally, PRPF19 is recruited to DNA damage sites by the RPA complex, where it ubiquitinates RPA1 and RPA2 to facilitate ATR activation and coordinate the DNA damage response. It also contributes to DNA double-strand break repair and interstrand cross-link repair through interactions with repair factors. The protein localizes primarily to the nucleus, including the nucleoplasm, and is recruited to damaged DNA sites, with additional presence in the cytoplasm, mitotic spindle apparatus, and lipid droplets, highlighting its diverse cellular roles in transcription-coupled repair, cell cycle progression, and potentially neural differentiation and lipid droplet biogenesis.