Recombinant EME1 protein (His tag)

Catalog Number	540945
Synonyms	Crossover junction endonuclease EME1; Essential meiotic structure-specific endonuclease 1; MMS4 homolog; hMMS4
Species	Human
Expression System	E. coli
Accession	Q96AY2
Molecular Weight	Predictes a molecular mass of 20.51 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 21 kDa band.

Product Information

Sequence Region	403-570
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 403-570 aa (Q96AY2) 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 EME1 (403-570) is a high-purity, stable fragment of the structure-specific endonuclease subunit EME1, designed for structural and biochemical studies. This 168-amino acid fragment retains key functional regions, enabling researchers to investigate DNA recognition and bending mechanisms critical for genome stability maintenance. EME1 is a non-catalytic subunit of the heterodimeric MUS81-EME1 endonuclease complex, essential for maintaining genome stability through resolution of DNA recombination intermediates. The complex exhibits structure-specific cleavage activity on 3'-flaps and nicked Holliday junctions, with EME1 playing a crucial role in DNA recognition and bending. During prometaphase, MUS81-EME1 resolves mitotic recombination intermediates that form during homologous recombination. The protein localizes primarily to the nucleus and nucleolus, and is recruited to sites of DNA damage in S-phase cells, highlighting its importance in DNA repair pathways and cellular response to genomic stress.