Recombinant PEG10 protein (His tag)

Catalog Number	545325
Synonyms	Embryonal carcinoma differentiation-regulated protein; Mammalian retrotransposon-derived protein 2; Myelin expression factor 3-like protein 1; MEF3-like protein 1; Paternally expressed gene 10 protein; Retrotransposon gag domain-containing protein 3; Retrotransposon-derived gag-like polyprotein; Ty3/Gypsy-like protein
Species	Human
Expression System	E. coli
Accession	Q86TG7
Molecular Weight	Predictes a molecular mass of 23.08 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 23 kDa band.

Product Information

Sequence Region	281-474
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>85%, 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 281-474 aa (Q86TG7) 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 PEG10 (281-474) is a high-purity, stable fragment of the human Retrotransposon-derived protein PEG10, designed for structural and biochemical studies. This 194-amino acid fragment offers researchers a soluble and functional unit to investigate PEG10's roles in mRNA encapsulation, extracellular vesicle formation, and cancer progression mechanisms. PEG10 is a retrotransposon-derived protein that binds its own mRNA and self-assembles into virion-like capsids, forming extracellular vesicles that enable intercellular transfer of PEG10 mRNA. It plays crucial roles in placenta formation through trophoblast stem cell differentiation and adipocyte differentiation. PEG10 is overexpressed in multiple cancers, where it promotes tumor progression by driving cell cycle progression and inhibiting TGF-beta signaling through interaction with ACVRL1 receptor. The protein localizes to extracellular vesicles, cytoplasm, and nucleus, with predominant cytoplasmic detection in various carcinomas. This recombinant fragment represents a stable, soluble region ideal for studying PEG10's molecular interactions and functional mechanisms.