

Recombinant Homo sapiens Twinkle protein, mitochondrial

Catalog No: #AP73105

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Package Size: #AP73105-1 20ug #AP73105-2 100ug #AP73105-3 1mg

Description

Product Name	Recombinant Homo sapiens Twinkle protein, mitochondrial
Brief Description	Recombinant Protein
Host Species	Yeast
Purification	Greater than 90% as determined by SDS-PAGE.
Immunogen Description	Expression Region:32-684aaSequence Info:Full Length
Other Names	Progressive external ophthalmoplegia 1 protein;T7 gp4-like protein with intramitochondrial nucleoid localization;T7-like mitochondrial DNA helicase
Accession No.	Q96RR1
Uniprot	Q96RR1
GeneID	56652;
Calculated MW	75.5 kDa
Tag Info	N-terminal 6xHis-tagged
Target Sequence	APGPPRRRYRKETLQALDMPVLPVTATEIRQYLRGHGIPFQDGHSLRALSPFAESSQLKGQTVTTSFSLFID KTTGHFLCMTSLAEGSWEDFQASVEGRGDGAREGFLLSKAPEFEDSEEVRRWNRRAIPLWELPDQEEVQLAD TMFGLTKVTDLTKRFSVRYLRPARSLVFPWFSPGGSGRLGLKLEAKCQGDGVSYEETTIPRPSAYHNLFG PLISRRDAEVVLTRELDLALNQSTGLPTLTLPRGTTCLPPALLPYLEQFRRIVFWLGDDLRSWEAAKLFARKL NPKRCFLVRPGDQQPRPLEALNGGFNLSRILRTALPAWHKSIVSFRQLREEVLGELSNEQAAGLRWSRFPD LNRILKGHRKGELTVFTGPTGSGKTTFISEYALDLCQGVNTLWGSFEISNVRLARVMLTQFAEGRLEDQLDKY DHWADRFEDLPLYFMTFHGQQSIRTVIDTMQHAVYVYDICHVIDNLQFMMGHEQLSTDRIAQDYIIGVFRKFA TDNNCHVTLVIHPRKEDDDKELQTASIFGSAKASQEADNVLILQDRKLVTPGPKRYLQVSKNRFDGDVGVFPL EFNKNSLTFSIPPKNKARLKKIKDDTGPVAKKPSSGKKGATTQNSEICSGQAPTDPDQPTSKRSK
Formulation	Tris-based buffer50% glycerol
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C,-80°C. The shelf life of lyophilized form is 12 months at -20°C,-80°C.Notes:Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.

Background

Involved in mitochondrial DNA (mtDNA) metabolism. Could function as an adenine nucleotide-dependent DNA helicase. Function inferred to be critical for lifetime maintenance of mtDNA integrity. In vitro, forms in combination with POLG, a processive replication machinery, which can use double-stranded DNA (dsDNA) as template to synthesize single-stranded DNA (ssDNA) molecules. May be a key regulator of mtDNA copy number in mammals.

References

Human mitochondrial DNA deletions associated with mutations in the gene for Twinkle, a phage T7 gene 4-like protein localized in mitochondria. Spelbrink J.N., Li F.-Y., Tiranti V., Nikali K., Yuan Q.-P., Tariq M., Wanrooij S., Garrido N., Comi G., Morandi L., Santoro L., Toscano A., Fabrizi G.-M., Somer H., Croxen R., Beeson D., Poulton J., Suomalainen A., Jacobs H.T., Zeviani M., Larsson C. Nat. Genet. 28:223-231(2001) Research Topic: Epigenetics and Nuclear Signaling

Note: This product is for in vitro research use only