Data Sheet (Cat.No.TMPH-01214)

TargetMol

DNASE1L3 Protein, Human, Recombinant

General Information

Synonyms:	DNASE1L3;Deoxyribonuclease gamma;DNAS1L3;DHP2;Liver and spleen DNase (LS-DNase; LSD);DNase I homolog protein DHP2;Deoxyribonuclease I-like 3 (DNase I-like 3);DNase gamma
Protein Construction:	21-305 aa
Species:	Human
Expression Host:	E. coli
Accession:	Q13609
Molecular Weight:	33.4 kDa (predicted)
AA Sequence:	MRICSFNVRSFGESKQEDKNAMDVIVKVIKRCDIILVMEIKDSNNRICPILMEKLNRNSRRGITYNYVISSRLGR NTYKEQYAFLYKEKLVSVKRSYHYHDYQDGDADVFSREPFVVWFQSPHTAVKDFVIIPLHTTPETSVKEIDELV EVYTDVKHRWKAENFIFMGDFNAGCSYVPKKAWKNIRLRTDPRFVWLIGDQEDTTVKKSTNCAYDRIVLRGQ EIVSSVVPKSNSVFDFQKAYKLTEEEALDVSDHFPVEFKLQSSRAFTNSKKSVTLRKKTKSKRS

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 85% as determined by SDS-PAGE.
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Tris-based buffer, 50% glycerol

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Has DNA hydrolytic activity. Is capable of both single- and double-stranded DNA cleavage, producing DNA fragments with 3'-OH ends. Can cleave chromatin to nucleosomal units and cleaves nucleosomal and liposome-

coated DNA. Acts in internucleosomal DNA fragmentation (INDF) during apoptosis and necrosis. The role in apoptosis includes myogenic and neuronal differentiation, and BCR-mediated clonal deletion of self-reactive B cells. Is active on chromatin in apoptotic cell-derived membrane-coated microparticles and thus suppresses anti-DNA autoimmunity. Together with DNASE1, plays a key role in degrading neutrophil extracellular traps (NETs). NETs are mainly composed of DNA fibers and are released by neutrophils to bind pathogens during inflammation. Degradation of intravascular NETs by DNASE1 and DNASE1L3 is required to prevent formation of clots that obstruct blood vessels and cause organ damage following inflammation.

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