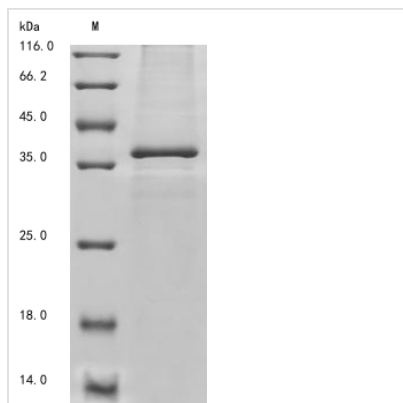




Recombinant Human Deoxyribonuclease gamma (DNASE1L3)

Product Code	CSB-BP621686HUb1
Abbreviation	Recombinant Human DNASE1L3 protein
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.
Uniprot No.	Q13609
Form	Liquid or Lyophilized powder
Storage Buffer	If the delivery form is liquid, the default storage buffer is Tris/PBS-based buffer, 5%-50% glycerol. If the delivery form is lyophilized powder, the buffer before lyophilization is Tris/PBS-based buffer, 6% Trehalose.
Product Type	Recombinant Proteins
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 85% as determined by SDS-PAGE.
Sequence	MRICSFNVRSFGESKQEDKNAMDVIVKVIKRCDIILVMEIKDSNNRICPILMEKLN RNSRRGITYNYVISSRLGRNTYKEQYAFLYKEKLVSVKRSYHYHDYQDGDADV FSREPFVWFQSPHTAVKDFVVIPLHTTPETSVKEIDELVEVYTDVKHRWKAEN FIFMGDFNAGCSYVPKKA WKNI RLRTDPRFVWLIGDQEDTTVKKSTNCAYDRI VLRGQEIVSSVVPKSNVDFDFQKAYKLTEEEALDVSDHFPVEFKLQSSRAFTN SKKSVTLRKTKTSKRS
Research Area	Cancer
Source	Baculovirus
Target Names	DNASE1L3
Expression Region	21-305aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 10xHis-tagged and C-terminal Myc-tagged
Mol. Weight	37.2 kDa
Protein Length	Full Length
Image	



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

The recombinant human DNASE1L3 protein synthesis in baculovirus cells necessitates the incorporation of a DNA fragment encoding the human DNASE1L3 protein (21-305aa) into a plasmid vector along with the N-terminal 10xHis and C-terminal Myc-tag gene, followed by the transformation of this vector into baculovirus cells. After screening for positive cells, they are cultured and induced to express the DNASE1L3 protein. Cell lysis is performed to gather the recombinant human DNASE1L3 protein, which undergoes affinity purification and is then analyzed using SDS-PAGE and subsequent staining of the gel with Coomassie Brilliant Blue. The purity of the resulting recombinant human DNASE1L3 protein reaches up to 85%.

DNASE1L3, a member of the DNase family, functions as an endonuclease that degrades DNA during apoptosis [1]. DNASE1L3 has been suggested to interact with DFFB in DNA fragmentation during apoptosis [2]. DNASE1L3 was found to have both nuclear and extranuclear localization, indicating its diverse functions [3]. DNASE1L3 can degrade DNA complexed with proteins, like histone, compared with DNase1 in vitro [4]. The nuclease activity of DNASE1L3 is required to release DNA-binding proteins involved in IL-1 β processing, indicating DNASE1L3's role in regulating inflammasome-dependent cytokine secretion [5].

DNASE1L3 has also been associated with immune response-related neutrophil activation and the regulation of acute inflammatory response and neutrophil-mediated cytotoxicity [6]. DNASE1L3 proteins contain an additional C-terminal domain of 21 amino acids rich in basic amino acids lysine and arginine [7]. DNASE1L3 may relieve cytoplasmic DNA accumulation under DNA damage response (DDR) activation [8]. The serum concentration of DNASE1L3 protein is reported to decrease in autoimmune diseases, suggesting DNASE1L3's involvement in their development [9]. DNASE1L3 inhibits hepatocellular carcinoma proliferation, invasion, and metastasis by interacting with β -catenin to promote its ubiquitin degradation pathway [10].

References:

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Reconstitution

We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL. We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.

Shelf Life

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.