



Human DNA Topoisomerase I (Scl70)

Origin:	Recombinant	Cat. No.:	41630
Tag:	N-terminal 6xHis	Size:	0.1 mg
Source:	<i>Spodoptera frugiperda</i> Sf9	Purity:	>90%
Other Names:	TOP1, Scl 70, Scl-70	Species:	Human

Description

Expressed in insect Sf9 cells with total 789 AA. Mw: 93.7 KDa (calculated). N-terminal 6xHis-tag and TEV cleavage site, 25 extra AA (highlighted).

Recombinant antigen for research use or manufacturing only.

Introduction to the Molecule

Type I topoisomerase, also called as TOP1 and Scl-70, is an enzyme responsible for cutting one of the two strands of double-stranded DNA, which interconverts supercoiled DNA to the necessary topological conformations for standard DNA replication and transcription.

Scl-70 is a target antigen for anti-Scl-70 autoantibody, which is a specific marker in scleroderma patients (specificity 98-100%) and are related with the existence of diffuse skin involvement and pulmonary fibrosis.

Immunological Function

As an autoantigen, Scl-70 binds with IgG-type human auto-antibodies.

Amino Acid Sequence

MSYYHHHHHDYDIPTTENLYFQGASGDHLHNSDQIEADFRNLNDSHKHKDKHKDREHRH
KEHKKEKDREKSKHSNSEHKDSEKHKHEKEKTKHKDGSSEKHKDKHKDRDKEKRKEEKVRAS
GDAKIKKEKENGFSPPQIKDEPEDDGYFVPPKEDIKPLKRPRDEDDADYKPKIKTEDTKKEKK
RKLEEEEDGKLLKPKNKDKDKKVPEDNKKKKPKKEEQKWKWWEERYPEGIKWKFLEHKG
PVFAPPYEPLPENVKFYDVGKVMKLSPKAEVATFFAKMLDHEYTTKEIFRKNFFKDWRKEMTNE
EKNIITNLSKCDFTQMSQYFKAQTEARKQMSKEEKLKIKEENEKLLKEYGFCIMDNHKERIANFK
IEPPGLFRGRGNHPKMGMLKRRIMPEDIIINCSKDAKVPSPPGHKWKEVRHDNKVTWLVSWT
ENIQGSIKYIMLNPSSRIKGEKDWQKYETARRLKKCVDKIRNQYREDWKSSEMVRQRAVALY
FIDKLALRAGNEKEEGETADTVGCCSLRVEHINLHPELDGQYVVEFDLGLKDSIRYYNKVPVEK
RVFKNLQLFMENKQPEDDLFDRLNTGILNKHLQDLMEGLTAKVFRTYNASITLQQQLKELTAPD
ENIPAKILSYNRRANRAVAILCNHQRAPPKTFEKSMMNLQTKIDAKKEQLADARRDLKSAKADAK
VMKDAKTKKVVESKKKAVQRLEEQLMKLEVQATDREENKQIALGTSKLNYLDPRITVAWCKKW
GVPIEKIYNKTQREKFAWAIDMADEDYEF

Applications

Standard ELISA test, line/dot assay and microarray assay with positive/negative sera panels.





Formulation

Liquid in storage buffer (50mM Tris, 300-500mM NaCl, 10% Glycerol, Protease inhibitor, pH8.0).

Storage

Store at -80°C. Avoid repeated freezing /thawing cycles.

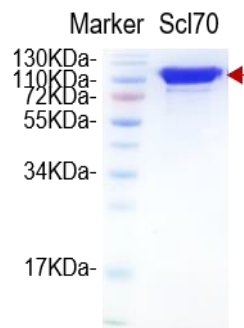
Quality Control Test

BCA to determine quantity of the protein.

SDS PAGE to determine purity of the protein.

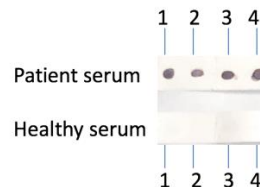
Immunodot analysis to determine functionality of protein.

SDS-PAGE Gel



Dot blot assay

Dot blot analysis of Scl-70



Analysis of serum from healthy subjects and patients. Recombinant autoantigens were utilized in this dot-blot assay for validation.

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