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California Bioscience

Product Datasheet

Product Name Recombinant Human DNA Topoisomerase-I
Catalog No CB500483
Source *Sf9 insect cells.*
Synonyms DNA topoisomerase 1, EC 5.99.1.2, DNA topoisomerase I, TOP1, Scl-70.

Description
DNA toposisomerase I is a key nuclear enzyme that interconverts supercoiled DNA to the required topological conformations for normal DNA replication and transcription. This enzyme is the target antigen for the so-called Scl-70 autoantibodies. Scl-70 antibodies are a specific marker in Scleroderma patients (specificity 98-100%) and are associated with the presence of diffuse skin involvement and pulmonary fibrosis.
In human tissues the DNA topoisomerase I is initially synthesized as a protein with 100 kDa molecular weight. Most of this precursor is then proteolytically processed to a species with 70 kDa molecular weight from which the Scl-70 antigen has derived its name.
DNA Topoisomerase-I Human Recombinant produced in SF9 is a glycosylated, polypeptide chain having a molecular mass of 91,576 Dalton.
The TOP1is expressed with a -6xHis tag and purified by proprietary chromatographic techniques.

Physical Appearance
Sterile Filtered clear solution.

Formulation
TOP1 is supplied in 16mM HEPES buffer pH-8, 250mM sodium chloride, and 20% glycerol.

Immunological functions
1. Binds IgG-type human auto-antibodies.
2. Standard ELISA test (checker-board analysis of positive/negative sera panels including CDC international reference sera).

Applications
Western-Blot with monoclonal anti-hexa-His-tag antibody & Scleroderma patient sera.

Coating concentration
0.5-0.8 µg/ml (depending on the type of ELISA plate and coating buffer).
Suitable for biotinylation and iodination.

Storage Conditions
Store at 4℃ if entire vial will be used within 2-4 weeks. Store, frozen at -20℃ for longer periods of time. **Avoid multiple freeze-thaw cycles.**

Purity
Greater than 80% as determined by SDS-PAGE.

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