Recombinant Human U1-snRNP 68 Protein (68 kDa)

Antigen Specification

Product Number: 13000

Description:
Human U1-snRNP 68 protein (68 kDa) component of the U1 small nuclear ribonucleoprotein particle.
Recombinant antigen for solid (ELISA) and fluid phase diagnostic assays.

Immunological function:
Binds IgG-type human auto-antibodies.

Origin:
Recombinant. Expressed in *E. coli* bacterial cells.

Expression construct:
cDNA coding for the 70kDa isoform of the human U1-snRNP 68 protein (lacking 66 internal amino acids outside the known epitope-containing areas) fused to a hexa-histidine purification tag.

Biochemical tests:
SDS-PAGE (purity > 90 %); Western-Blot with i: MCTD sera (Mixed Connective Tissue Disease); ii: monoclonal anti-hexa-His-tag antibody.

Calculated molecular weight:
44,800 Dalton
(U1-snRNP 68 displays aberrant electrophoretic mobility leading to an apparent discrepancy between calculated molecular weight and the 55-56 kDa molecular weight determined for this internally shortened molecule by SDS gel electrophoresis).

Calculated isoelectric point:
pH 10.2

Immunological tests/Functionality:
Standard ELISA test (checker-board analysis of positive/negative sera panels, including CDC international reference sera)

Recommended buffer/storage and handling conditions:
Recommendations for storage buffer: neutral to slightly alkaline pH; due to purification workup under denaturing conditions presence of up to 0.02 % SDS (or similar detergents) may be required for maintaining solubility. Storage temperature: –70° to –80° C. Repeated freeze/thaw cycles should be avoided.

Coating concentration:
0.3-0.6 µg/ml (depending on the type of ELISA plate and coating buffer). Suitable for biotinylation and iodination.

Remark on assays with this antigen:
Anti-RNP autoantibodies, traditionally determined with the entire U1-snRNP particle as antigen, will require simultaneous use of recombinant U1-snRNP 68, U1-snRNP A and U1-snRNP C antigens for complete identification of anti-RNP positive sera.