

U1-snRNP 68/70 kDa

Antigen Specification

Product Number: 13000

Description:

Human U1-snRNP 68/70 kDa protein component of the U1 small nuclear ribonucleoprotein particle. Recombinant antigen for research use or manufacturing only.

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 68/70 kDa 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: anti-U1-snRNP 68/70 kDa autoantibody-positive sera; ii: monoclonal anti-hexa-His-tag antibody.

Calculated molecular weight:

44,800 Dalton
(U1-snRNP 68/70 kDa 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 (checkerboard analysis of positive/negative sera panels, including CDC international reference sera); line assay and microarray test with positive/negative sera panels.

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 conditions: -70°C or below. 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 labeling of functional groups.

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 68/70 kDa, U1-snRNP A and U1-snRNP C antigens for complete identification of anti-RNP positive sera.

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