SANTA CRUZ BIOTECHNOLOGY, INC.

U2AF65 (N-14): sc-19958

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

SF3b is a U2 snRNP-associated protein complex essential for spliceosome assembly. SF3b contains the spliceosomal proteins SAPs 49, 130, 145 and 155. SAPs 130, 145 and 155 associate with one another to form a complex that is present in HeLa nuclear extracts. SAPs 49 and 145 are known to interact directly with each other. Unexpectedly, the SAP 49-SAP 145 protein-protein interaction requires the amino-terminus of SAP 49, which contains two RNA-recognition motifs. SAP 49 and SAP 145 interact directly with both U2 snRNP and the pre-mRNA, which suggests that this protein complex plays a role in tethering U2 snRNP to the branch site. U2AF recruits SAP 49 to the branch point sequence during the initial steps of spliceosome assembly. U2AF exists as a heterodimer consisting of U2AF65 and U2AF35 and is required for splicing *in vivo*.

REFERENCES

1. Zamore, P.D. and Green, M.R. 1989. Identification, purification and biochemical characterization of U2 small nuclear ribonucleoprotein auxiliary factor. Proc. Natl. Acad. Sci. USA 86: 9243-9247.
2. Kanaar, R., et al. 1993. The conserved pre-mRNA splicing factor U2AF from *Drosophila*: requirement for viability. Science 262: 569-573.
3. Champion-Arnaud, P. and Reed, R. 1994. The prespliceosome components SAP 49 and SAP 145 interact in a complex implicated in tethering U2 snRNP to the branch site. Genes Dev. 8: 1974-1983.
4. Wells, S.E., et al. 1996. CUS1, a suppressor of cold-sensitive U2 snRNA mutations, is a novel yeast splicing factor homologous to human SAP 145. Genes Dev. 10: 220-232.
5. Igel, H., et al. 1998. Conservation of structure and subunit interactions in yeast homologues of splicing factor 3b (SF3b) subunits. RNA 4: 1-10.

CHROMOSOMAL LOCATION

Genetic locus: U2AF2 (human) mapping to 19q13.42; U2af2 (mouse) mapping to 7 A1.

SOURCE

U2AF65 (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of U2AF65 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-19958 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

U2AF65 (N-14) is recommended for detection of U2AF65 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

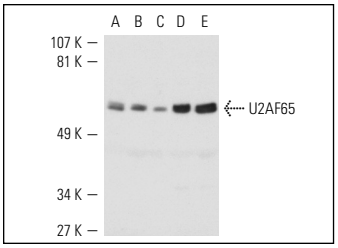
U2AF65 (N-14) is also recommended for detection of U2AF65 in additional species, including bovine.

Suitable for use as control antibody for U2AF65 siRNA (h): sc-37667, U2AF65 siRNA (m): sc-37668, U2AF65 shRNA Plasmid (h): sc-37667-SH, U2AF65 shRNA Plasmid (m): sc-37668-SH, U2AF65 shRNA (h) Lentiviral Particles: sc-37667-V and U2AF65 shRNA (m) Lentiviral Particles: sc-37668-V.

Molecular Weight of U2AF65: 65 kDa.

Positive Controls: Jurkat nuclear extract: sc-2132, IMR-32 nuclear extract: sc-2148 or KNRK nuclear extract: sc-2141.

DATA



U2AF65 (N-14): sc-19958. Western blot analysis of U2AF65 expression in Jurkat (**A**), IMR-32 (**B**), KNRK (**C**), HeLa (**D**) and SK-N-MC (**E**) nuclear extracts.

SELECT PRODUCT CITATIONS

1. Heyd, F., et al. 2006. Auxiliary splice factor U2AF26 and transcription factor Gfi-1 cooperate directly in regulating CD45 alternative splicing. Nat. Immunol. 7: 859-867.
2. Izumikawa, K., et al. 2008. Association of human DNA helicase RecQ5β with RNA polymerase II and its possible role in transcription. Biochem. J. 413: 505-516.
3. Fay, J., et al. 2009. Increased expression of cellular RNA-binding proteins in HPV-induced neoplasia and cervical cancer. J. Med. Virol. 81: 897-907.