# SANTA CRUZ BIOTECHNOLOGY, INC.

# ZRSR1/2 (S-12): sc-132604



## BACKGROUND

The removal of introns from a transcribed pre-mRNA segment is facilitated by a complex known as the spliceosome. Spliceosome assembly is initiated by the binding of U1 small nuclear ribonucleoprotein particle (U1 SnRNP) to the 5' splice site and the U2 SnRNP auxiliary factor (U2AF) to the pyrimidine tract. ZRSR1, also known as U2 (RNU2) small nuclear RNA auxiliary factor 1-like or RNA-binding motif and serine/arginine rich protein 1, is a 479 amino acid protein. ZRSR2 is a 482 amino acid protein that shares a high degree of homology with ZRSR1. Both proteins contain two C3H1-type zinc fingers, one RNA recognition motif (RRM) domain and localize to the nucleus. ZRSR1 is encoded by a gene that maps to chromosome 5. With 181 million base pairs encoding around 1,000 genes, chromosome 5 comprises about 6% of human genomic DNA. Deletion of the p arm of chromosome 5 leads to Cri du chat syndrome, while deletion of the q arm on chromosome 5 is common in therapy-related acute myelogenous leukemias and myelodysplastic syndrome.

#### REFERENCES

- Kitagawa, K., Wang, X., Hatada, I., Yamaoka, T., Nojima, H., Inazawa, J., Abe, T., Mitsuya, K., Oshimura, M. and Murata, A. 1995. Isolation and mapping of human homologues of an imprinted mouse gene U2af1-rs1. Genomics 30: 257-263.
- Pearsall, R.S., Shibata, H., Brozowska, A., Yoshino, K., Okuda, K., deJong, P.J., Plass, C., Chapman, V.M., Hayashizaki, Y. and Held, W.A. 1996. Absence of imprinting in U2AFBPL, a human homologue of the imprinted mouse gene U2afbp-rs. Biochem. Biophys. Res. Commun. 222: 171-177.
- Peng, Y.F., Mandai, K., Sakisaka, T., Okabe, N., Yamamoto, Y., Yokoyama, S., Mizoguchi, A., Shiozaki, H., Monden, M. and Takai, Y. 2000. Ankycorbin: a novel actin cytoskeleton-associated protein. Genes Cells 5: 1001-1008.
- Nagase, T., Kikuno, R., Ishikawa, K.I., Hirosawa, M. and Ohara, O. 2000. Prediction of the coding sequences of unidentified human genes. XVI. The complete sequences of 150 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 7: 65-73.
- Graveley, B.R., Hertel, K.J. and Maniatis, T. 2001. The role of U2AF35 and U2AF65 in enhancer-dependent splicing. RNA 7: 806-818.
- Ota, T., et al. 2004. Complete sequencing and characterization of 21,243 full-length human cDNAs. Nat. Genet. 36: 40-45.
- Lützelberger, M., Backström, E. and Akusjärvi, G. 2005. Substrate-dependent differences in U2AF requirement for splicing in adenovirus-infected cell extracts. J. Biol. Chem. 280: 25478-25484.

# CHROMOSOMAL LOCATION

Genetic locus: ZRSR1 (human) mapping to 5p15.33, ZRSR2 (human) mapping to Xp22.2; Zrsr1 (mouse) mapping to 11 A3.2, Zrsr2 (mouse) mapping to X F5.

#### SOURCE

ZRSR1/2 (S-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ZRSR2 of human origin.

#### PRODUCT

Each vial contains 200  $\mu g$  lgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-132604 P, (100  $\mu g$  peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

# **APPLICATIONS**

ZRSR1/2 (S-12) is recommended for detection of ZRSR1 and ZRSR2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

ZRSR1/2 (S-12) is also recommended for detection of ZRSR1 and ZRSR2 in additional species, including equine, canine, bovine and porcine.

Molecular Weight of ZRSR1/2: 58 kDa.

#### **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluo-rescence: use donkey anti-goat IgG-FITC: sc-2783 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

# **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.

## PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.