

## Tra-2 $\beta$ (N-20)-R: sc-8595-R

### BACKGROUND

Human transformer-2  $\alpha$  (Tra-2 $\alpha$ ) and Tra-2 $\beta$  are nuclear proteins that associate with distinct pre-mRNA splicing enhancer elements. Tra-2 $\alpha$  is the functional homolog of the *Drosophila* TRA-2 protein, which regulates the female specific pre-mRNA splicing pattern of the doublesex (dsx) gene in *Drosophila*. Human Tra-2 proteins are able to actively splice *Drosophila* sex factors; however, human Tra-2 $\alpha$  has not been shown to induce sexual differentiation, which suggests that human Tra-2 $\alpha$  proteins may regulate splicing patterns involving alternative mechanisms. Tra-2 $\alpha$  and Tra-2 $\beta$  proteins contain a single RNP-type RNA-binding domain and selectively bind to purine-rich sequences to facilitate mRNA splicing. Expression of Tra-2 $\beta$  is upregulated during the reoxygenation of hypoxic astrocytes, and both Tra-2 $\alpha$  and Tra-2 $\beta$  are detected in nuclear fractions from HeLa cells. Tra-2 $\alpha$  and Tra-2 $\beta$  interact with the serine/arginine-rich (SR) family of splicing factors to form Tra-2/SR complexes that then regulate tissue-specific alternative splicing patterns of many pre-mRNAs.

### REFERENCES

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- Dauwalder, B., Amaya-Manzanares, F. and Mattox, W. 1996. A human homologue of the *Drosophila* sex determination factor transformer-2 has conserved splicing regulatory functions. *Proc. Natl. Acad. Sci. USA* 93: 9004-9009.
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- Beil, B., Screaton, G. and Stamm, S. 1997. Molecular cloning of human transformer-2  $\beta$ -1 and human transformer-2  $\beta$ -2, two human homologs of Tra-2 generated by alternative splicing. *DNA Cell Biol.* 16: 679-690.
- Tacke, R., Tohyama, M., Ogawa, S. and Manley, J.L. 1998. Human Tra-2 proteins are sequence-specific activators of pre-mRNA splicing. *Cell* 93: 139-148.

### CHROMOSOMAL LOCATION

Genetic locus: TRA2B (human) mapping to 3q27.2; Tra2b (mouse) mapping to 16 B1.

### SOURCE

Tra-2 $\beta$  (N-20)-R is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of Tra-2 $\beta$  of human origin.

### STORAGE

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

### PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-8595 X, 200  $\mu$ g/0.1 ml.

Blocking peptide available for competition studies, sc-8595 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

Tra-2 $\beta$  (N-20)-R is recommended for detection of Tra-2 $\beta$  of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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).

Tra-2 $\beta$  (N-20)-R is also recommended for detection of Tra-2 $\beta$  in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Tra-2 $\beta$  siRNA (h): sc-38566, Tra-2 $\beta$  siRNA (m): sc-38567, Tra-2 $\beta$  shRNA Plasmid (h): sc-38566-SH, Tra-2 $\beta$  shRNA Plasmid (m): sc-38567-SH, Tra-2 $\beta$  shRNA (h) Lentiviral Particles: sc-38566-V and Tra-2 $\beta$  shRNA (m) Lentiviral Particles: sc-38567-V.

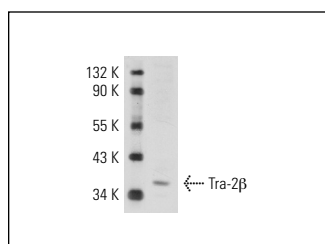
Tra-2 $\beta$  (N-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of Tra-2 $\beta$  isoforms 1/2/3: 33/22/4 kDa.

Molecular Weight (observed) of Tra-2 $\beta$ : 40 kDa.

Positive Controls: HeLa nuclear extract: sc-2120.

### DATA



Tra-2 $\beta$  (N-20)-R: sc-8595-R. Western blot analysis of Tra-2 $\beta$  expression in HeLa nuclear extract.

### RESEARCH USE

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



Try **Tra-2 $\beta$  (D-2): sc-166829** or **Tra-2 $\beta$  (D-4): sc-166769**, our highly recommended monoclonal alternatives to Tra-2 $\beta$  (N-20).