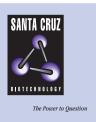
## SANTA CRUZ BIOTECHNOLOGY, INC.

# I-Scel (FL-86): sc-98269



## BACKGROUND

Group I intron-encoded endonucleases, like I-Scel, represent a new class of double strand cutting endonucleases which generate double strand breaks in site-specific sequences. Despite its small size, I-Scel initiates intron homing by recognizing and specifically cleaving a large intronless DNA sequence. I-Scel binds to its substrate in monomeric form. The I-Scel restriction site is absent from most prokaryotic and eukaryotic genomes. The mitochondrial I-Scel has an 18-bp recognition sequence and, therefore, has a very low probability of cutting DNA, even within large genomes. Double-strand breaks can be initiated by the I-Scel endonuclease at a predetermined location in the genome and the breaks can be repaired with a donor molecule homologous regions flanking the breaks.

#### REFERENCES

- Monteilhet, C., Perrin, A., Thierry, A., Colleaux, L., Dujon, B. 1990. Purification and characterization of the *in vitro* activity of I-Sce I, a novel and highly specific endonuclease encoded by a group I intron. Nucleic Acids Res. 18: 1407-1413.
- Perrin, A., et al. 1993. Asymmetrical recognition and activity of the I-Scel endonuclease on its site and on intron-exon junctions. EMBO J. 12: 2939-2947.
- Choulika, A., et al. 1995. Induction of homologous recombination in mammalian chromosomes by using the I-Scel system of *Saccharomyces cerevisiae*. Mol. Cell Biol. 15: 1968-1973.
- Mahillon, J., Rode, C.K., Leonard, C., Bloch, C.A. 1997. New ultrarare restriction site-carrying transposons for bacterial genomics. Gene 187: 273-279.
- Beylot, B., Spassky, A. 2001. Chemical probing shows that the intronencoded endonuclease I-Scel distorts DNA through binding in monomeric form to its homing site. J. Biol. Chem. 276: 25243-25253.

#### SOURCE

I-Scel (FL-86) is a rabbit polyclonal antibody raised against amino acids 150-235 mapping at the C-terminus of I-Scel of *Saccharomyces cerevisiae* origin.

## PRODUCT

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

#### **STORAGE**

Store at 4° C, \*\*D0 NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

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

#### APPLICATIONS

I-Scel (FL-86) is recommended for detection of I-Scel of *Saccharomyces cerevisiae* 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).

#### **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

### **RESEARCH USE**

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