SANTA CRUZ BIOTECHNOLOGY, INC.

Separase (XJ11-1B12): sc-56353

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Separase is a cysteine protease that triggers anaphase in all eukaryotes by participating in separation of sister chromatids during mitosis. Once activated, separase hydrolyzes the SCC1 subunit of cohesin, the chromosomal protein complex responsible for sister chromatid cohesion. Separase and cohesin are highly conserved from yeasts to humans. When the cell is not dividing, separase is prevented from cleaving cohesin through its association with another protein, securin. When anaphase is signaled, the securin is ubiquitinated and hydrolyzed by APC/cyclosome, releasing the active separase. Separase is transiently activated between the two meioses and may also be involved in homolog separation.

REFERENCES

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3. Zou, H., et al. 2002. Anaphase specific auto-cleavage of Separase. FEBS Lett. 528: 246-250.
4. Chestukhin, A., et al. 2003. Processing, localization and requirement of human Separase for normal anaphase progression. Proc. Natl. Acad. Sci. USA 100: 4574-4579.
5. Chestukhin, A., et al. 2003. Western blot screening for monoclonal antibodies against human Separase. J. Immunol. Methods 274: 105-113.
6. Sullivan, M., et al. 2003. A non-proteolytic function of Separase links the onset of anaphase to mitotic exit. Nat. Cell Biol. 5: 249-254.
7. Terret, M.E., et al. 2003. The meiosis I-to-meiosis II transition in mouse oocytes requires separase activity. Curr. Biol. 13: 1797-1802.
8. Fan, H.Y., et al. 2006. Regulation of Separase in meiosis: Separase transition in Xenopus oocytes during meiosis. Cell Cycle 5: 198-204.
9. Terret, M.E. and Jallepalli, P.V. 2006. Meiosis: separase strikes twice. Nat. Cell Biol. 8: 910-911.

CHROMOSOMAL LOCATION

Genetic locus: ESPL1 (human) mapping to 12q13.3; Espl1 (mouse) mapping to 15 F3.

SOURCE

Separase (XJ11-1B12) is a mouse monoclonal antibody raised against amino acids 1866-1996 of Separase of human origin.

This product has been manufactured by MBL International Corporation.

PRODUCT

Each vial contains 100 µg IgG_1 in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

RESEARCH USE

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

APPLICATIONS

Separase (XJ11-1B12) is recommended for detection of Separase of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Separase siRNA (h): sc-72040.

Molecular Weight of Separase: 230 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (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) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (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.

PROTOCOLS

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