SANTA CRUZ BIOTECHNOLOGY, INC.

Separase (H-300): sc-25839

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

1. Agarwal, R., et al. 2002. Mitotic regulation: the fine tuning of separase activity. Cell Cycle 1: 255-257.
2. Zou, H., et al. 2002. Anaphase specific auto-cleavage of separase. FEBS Lett. 528: 246-250.

CHROMOSOMAL LOCATION

Genetic locus: ESPL1 (human) mapping to 12q13.13; Espl1 (mouse) mapping to 15 F3.

SOURCE

Separase (H-300) is a rabbit polyclonal antibody raised against amino acids 1496-1795 mapping at the C-terminus of Separase 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.

STORAGE

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

APPLICATIONS

Separase (H-300) is recommended for detection of Separase 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).

Suitable for use as control antibody for Separase siRNA (h): sc-72040, Separase siRNA (m): sc-72041, Separase shRNA Plasmid (h): sc-72040-SH, Separase shRNA Plasmid (m): sc-72041-SH, Separase shRNA (h) Lentiviral Particles: sc-72040-V and Separase shRNA (m) Lentiviral Particles: sc-72041-V.

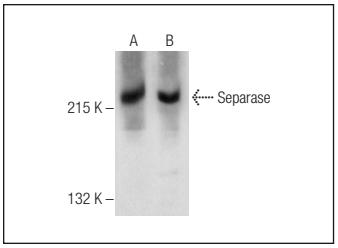
Molecular Weight of Separase: 230 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, HeLa whole cell lysate: sc-2200 or MDA-MB-231 cell lysate: sc-2232.

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™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) 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™ Mounting Medium: sc-24941.

DATA



Separase (H-300): sc-25839. Western blot analysis of Separase expression in MDA-MB-231 whole cell lysate (**A**) and HeLa nuclear extract (**B**).

SELECT PRODUCT CITATIONS

1. Chiu, S.C., et al. 2014. The mitosis-regulating and protein-protein interaction activities of astrin are controlled by aurora-A-induced phosphorylation. Am. J. Physiol. Cell Physiol. 307: C466-C478.

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.