



Separase (Separin, Caspase-like Protein ESPL1, ESP1, Extra Spindle Poles-like 1, Extra Spindle Poles-like 1 Protein, ESPL1, FLJ46492, KIAA0165, SSE)

Catalog number

S0952-01A

Supplier

United States Biological

In normal cellular proliferation, the maintenance of constant centriole numbers is strongly associated with cell cycle process and the disengagement of mother-daughter centriole (a requirement for duplication of centriole) is facilitated by separase (ESPL1, a cysteine endopeptidase) mediated proteolytic cleavage of cohesin, a "glue" protein complex which is also essential to sister-chromatide cohesion. Separase is a caspase-like protease which plays a key role in chromosome segregation by cleaving SCC1/RAD21 subunit of the cohesin complex at the onset of anaphase. During most of the cell cycle phases, separase is kept inactivated, and its proteolytic activity is tightly regulated by multiple inhibitory mechanisms combining securin binding, CyclinB1/Cdk1 mediated serine residue phosphorylation (pSer1226), PP2A binding and autocatalytic cleavage. Ectopic activation of separase proteolytic activity results in premature sister-chromatide separation/centriole disengagement and separase overexpression has been shown to induce aneuploidy and carcinogenesis.

Applications

Suitable for use in Peptide ELISA. Other applications not tested.

Recommended Dilution

Peptide ELISA: 1:100-1:2000

Optimal dilutions to be determined by the researcher.

Cellular Localization

Cytoplasmic and Nuclear.

Storage and Stability

May be stored at 4°C for short-term only. Aliquot to avoid repeated freezing and thawing. Store at -20°C. Aliquots are stable for 12 months after receipt. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap.

Immunogen

Synthetic peptide corresponding to an internal region (within residues 1400-1500) of the human separase. Species sequence homology: monkey (93%)

Formulation

Supplied as a liquid in TBS, pH 7.2, 0.1% BSA, 0.05% sodium azide

Purity

Purified by immunoaffinity chromatography.

Specificity



The specificity of this antibody is unknown. Species Crossreactivity: The species reactivity of this antibody is still undetermined.

Product Type

Pab

Source

human

Isotype

IgG

Grade

Affinity Purified

Applications

E

Crossreactivity

Hu

Storage

-20°C

Reference

1. Chestukhin, A., et al. Processing, localization, and requirement of human separase for normal anaphase progression. PNAS. 100:4574-4579 (2003)