Product Name: **Separase Rabbit Polyclonal Antibody**
Catalog #: **APRab17734**
For research use only.

Summary

Description	Rabbit polyclonal Antibody
Host	Rabbit
Application	WB,IHC,ICC/IF,ELISA
Reactivity	Human,Mouse
Conjugation	Unconjugated
Modification	Unmodified
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Concentration	1mg/ml
Storage	Aliquot and store at -20°C (valid for 12 months). Avoid freeze/thaw cycles.
Shipping	Ice bags
Buffer	Liquid in PBS containing 50% glycerol, 0.5% protective protein and 0.02% New type preservative N.
Purification	Affinity purification

Application

Dilution Ratio	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:200-1:1000,ELISA 1:20000-1:40000
Molecular Weight	230kDa

Antigen Information

Gene Name	ESPL1
Alternative Names	ESPL1; ESP1; KIAA0165; Separin; Caspase-like protein ESPL1; Extra spindle poles-like 1 protein; Separase
Gene ID	9700.0
SwissProt ID	Q14674
Immunogen	The antiserum was produced against synthesized peptide derived from human SEPARASE. AA range:767-816

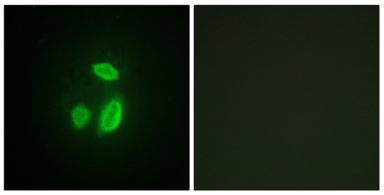
Background

Stable cohesion between sister chromatids before anaphase and their timely separation during anaphase are critical for chromosome inheritance. In vertebrates, sister chromatid cohesion is released in 2 steps via distinct mechanisms. The first step involves phosphorylation of STAG1 (MIM 604358) or STAG2 (MIM 300826) in the cohesin complex. The second step involves cleavage of the cohesin subunit SCC1 (RAD21; MIM 606462) by ESPL1, or separase, which initiates the final separation of sister chromatids (Sun et al., 2009 [PubMed 19345191]).[supplied by OMIM, Nov 2010],catalytic activity:All bonds known to be hydrolyzed by this endopeptidase have arginine in P1 and an acidic residue in P4. P6 is often occupied by an acidic residue or by an hydroxy-amino-acid residue, the phosphorylation of which enhances cleavage.,enzyme regulation:Regulated by at least two independent mechanisms. First, it is inactivated via its interaction with securin/PTTG1, which probably covers its active site. The association with PTTG1 is not only inhibitory, since PTTG1 is also required for activating it, the enzyme being inactive in cells in which PTTG1 is absent. PTTG1 degradation at anaphase, liberates it and triggers RAD21 cleavage. Second, phosphorylation at Ser-1126 inactivates it. The complete phosphorylation during mitosis, is removed when cells undergo anaphase. Activation of the enzyme at the metaphase-anaphase transition probably requires the removal of both securin and inhibitory phosphate.,function:Caspase-like protease, which plays a central role in the chromosome segregation by cleaving the SCC1/RAD21 subunit of the cohesin complex at the onset of anaphase. During most of the cell cycle, it is inactivated by different mechanisms.,PTM:Autocleaves. This function, which is not essential for its protease activity, is unknown.,PTM:Phosphorylated by CDC2. There are 8 Ser/Thr phosphorylation sites. Among them, Ser-1126 phosphorylation is the major site, which conducts to the enzyme inactivation.,similarity:Belongs to the peptidase C50 family.,subunit:Interacts with PTTG1. Interacts with RAD21.,

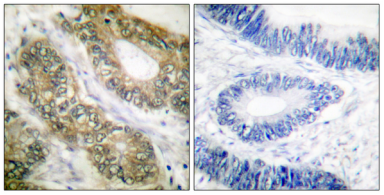
Research Area

Cell_Cycle_G1S;Cell_Cycle_G2M_DNA;Oocyte meiosis;

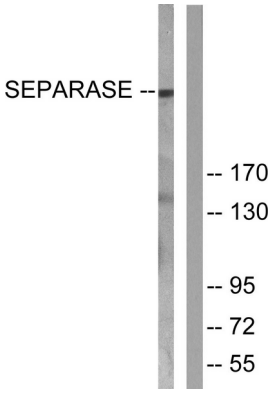
Image Data



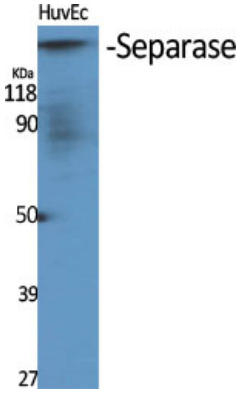
Immunofluorescence analysis of HUVEC cells, using SEPARASE Antibody. The picture on the right is blocked with the synthesized peptide.



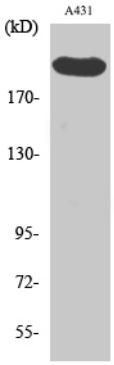
Immunohistochemistry analysis of paraffin-embedded human colon carcinoma tissue, using SEPARASE Antibody. The picture on the right is blocked with the synthesized peptide.



Western blot analysis of lysates from 293 cells, treated with EGF 200ng/ml 30 ', using SEPARASE Antibody. The lane on the right is blocked with the synthesized peptide.



Western Blot analysis of various cells using Separase Polyclonal Antibody diluted at 1: 1000



Western Blot analysis of A431 cells using Separase Polyclonal Antibody diluted at 1 : 1000