

Recombinant Human Securin protein ab87664

1 References 1 Image

Description	
Product name	Recombinant Human Securin protein
Purity	> 80 % SDS-PAGE. Purified by using conventional chromatography techniques.
Endotoxin level	< 1.000 Eu/µg
Expression system	Escherichia coli
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Sequence	MGSSHHHHHH SSGLVPRGSH MATLIYVDKE NGEPGTRVVA KDGLKLGSGP SIKALDGRSQ VSTPRFGKTF DAPPALPKAT RKALGTVNRA TEKSVKTKGP LKQKQPSFSA KKMTEKTVKA KSSVPASDDA YPEIEKFFPF NPLDFESFDL PEEHQIAHLP LSGVPLMILD EERELEKLFQ LGPPSPVKMP SPPWESNLLQ SPSSILSTLD VELPPVCCDIDI
Tags	His tag N-Terminus

Specifications	
Our Abpromise guarantee covers the use of ab87664 in the following tested applications.	
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.	
Applications	SDS-PAGE
Form	Liquid

Preparation and Storage	
Stability and Storage	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C. Avoid freeze / thaw cycle. pH: 8.00

Constituents: 0.316% Tris HCl, 20% Glycerol (glycerin, glycerine), 0.58% Sodium chloride, 0.0017% PMSF, 0.029% EDTA

General Info

Function

Regulatory protein, which plays a central role in chromosome stability, in the p53/TP53 pathway, and DNA repair. Probably acts by blocking the action of key proteins. During the mitosis, it blocks Separase/ESPL1 function, preventing the proteolysis of the cohesin complex and the subsequent segregation of the chromosomes. At the onset of anaphase, it is ubiquitinated, conducting to its destruction and to the liberation of ESPL1. Its function is however not limited to a blocking activity, since it is required to activate ESPL1. Negatively regulates the transcriptional activity and related apoptosis activity of TP53. The negative regulation of TP53 may explain the strong transforming capability of the protein when it is overexpressed. May also play a role in DNA repair via its interaction with Ku, possibly by connecting DNA damage-response pathways with sister chromatid separation.

Tissue specificity

Expressed at low level in most tissues, except in adult testis, where it is highly expressed. Overexpressed in many patients suffering from pituitary adenomas, primary epithelial neoplasias, and esophageal cancer.

Sequence similarities

Belongs to the securin family.

Developmental stage

Low level during G1 and S phases. Peaks at M phase. During anaphase, it is degraded.

Domain

The N-terminal destruction box (D-box) acts as a recognition signal for degradation via the ubiquitin-proteasome pathway.
The TEK-boxes are required for 'Lys-11'-linked ubiquitination and facilitate the transfer of the first ubiquitin and ubiquitin chain nucleation. TEK-boxes may direct a catalytically competent orientation of the UBE2C/UBCH10-ubiquitin thiolester with the acceptor lysine residue.

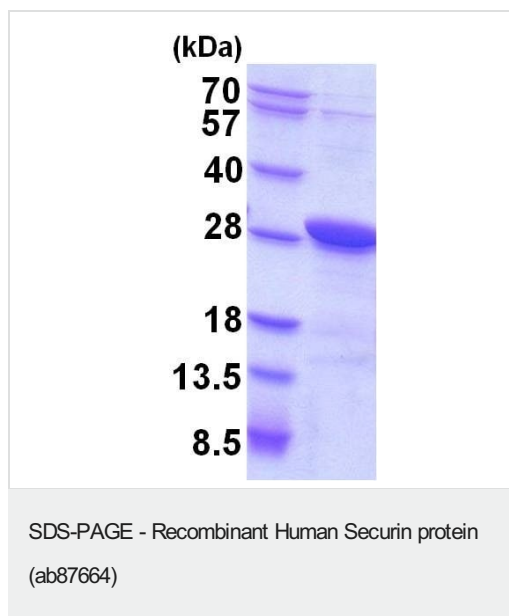
Post-translational modifications

Phosphorylated at Ser-165 by CDK1 during mitosis.
Phosphorylated in vitro by ds-DNA kinase.
Ubiquitinated through 'Lys-11' linkage of ubiquitin moieties by the anaphase promoting complex (APC) at the onset of anaphase, conducting to its degradation. 'Lys-11'-linked ubiquitination is mediated by the E2 ligase UBE2C/UBCH10.

Cellular localization

Cytoplasm. Nucleus.

Images



ab87664 on 15% SDS-PAGE (3µg)

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