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PTTG1 Human

Pituitary Tumor-Transforming Protein 1 Human Recombinant
RCP1738

Product Overview

Name	PTTG1 Human
Description	
Pituitary Tumor-Transforming Protein 1 Human Recombinant	
Accession (Primary)	O95997
Synonyms	
Securin, Pituitary tumor-transforming gene 1 protein, hPTTG, Tumor-transforming protein 1, Esp1-associated protein, PTTG1, EAP1, PTTG, TUTR1, MGC126883, MGC138276.	
Introduction	
PTTG1 (Securin) is mainly involved in the regulation of sister chromatid separation during cell division. Securin is a regulatory protein, which has a central role in chromosome stability, in the p53/TP53 pathway, and DNA repair. Additional two roles have been identified for PTTG1; the first one is to facilitate the transport of separase (cysteine protease) to the nucleus and the second role is to hinder the catalytic activity of separase. PTTG1 is ubiquitinated by the APC (Anaphase Promoting Complex), and subsequently degraded by the Proteasome, releasing separase. During the mitosis, PTTG1 blocks Separase/ESPL1 function, thus preventing the proteolysis of the cohesin complex and the ensuing segregation of the chromosomes. However, PTTG1 function is not restricted to a blocking activity only, since it is required to activate ESPL1. PTTG1 is ubiquitinated at the beginning of anaphase, leading to its destruction and to the liberation of ESPL1. PTTG1 contains two PXXP motifs, which are necessary for its transforming and tumorigenic activities, in addition to its stimulation of basic fibroblast growth factor expression. It also contains a D box (destruction box) which is essential for its degradation by the APC. The acidic C-terminal region of the Securin can function as a transactivation domain. Even though, PTTG1 is primarily a cytosolic protein, it partially localizes in the nucleus. PTTG1 is highly expressed in various tumors; it also has transforming activity in vitro and tumorigenic activity in vivo. Furthermore, PTTG1 negatively regulates the transcriptional activity and related apoptosis activity of TP53.	
Source	
Escherichia Coli.	
Physical Appearance	
Sterile Filtered colorless solution.	
Formulation	
The PTTG1 solution (1mg/ml) contains 20mM Tris-HCl buffer (pH8.0), 0.1M NaCl, 20% glycerol, 1mM EDTA and	

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0.1mM PMSF.

Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Purity

Greater than 90.0% as determined by SDS-PAGE.

Amino acid sequence

MGSSHHHHHH SSGLVPRGSH MATLIYVDKE NGEPGTRVVA KDGLKLGSGP SIKALDGRSQ VSTPRFGKTF DAPPALPKAT RKALGTVNRA TEKSVKTKGP LKQKQPSFSA KKMTEKTVKA KSSVPASDDA YPEIEKFFPF NPLDFESFDL PEEHQIAHLP LSGVPLMILD EERELEKLFQ LGPPSPVKMP SPPWESNLLQ SPSSILSTLD VELPPVCCDI DI.

Precautions

PTTG1 Human is for research use only and not for use in diagnostic or therapeutic procedures.

Target Information: (O95997)