

Anti-PTTG1/2/3 Antibody

Catalog # AP51461

Product Information

Application	WB, IHC, IF/IC
Primary Accession	O95997
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	22024

Additional Information

Gene ID	9232
Other Names	EAP1; PTTG; TUTR1; Securin; Esp1-associated protein; Pituitary tumor-transforming gene 1 protein; Tumor-transforming protein 1; hPTTG
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the center region of human PTTG1/2/3. The exact sequence is proprietary.
Dilution	WB~~ 1:1000 IHC~~1:100~500 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

Name	PTTG1
Synonyms	EAP1, PTTG, TUTR1
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.

Cellular Location

Cytoplasm. Nucleus.

Tissue Location

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.

References

Dominguez A.,et al.Oncogene 17:2187-2193(1998).

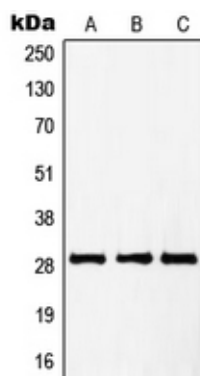
Mu Y.,et al.Submitted (SEP-1998) to the EMBL/GenBank/DDBJ databases.

Kakar S.S.,et al.Cytogenet. Cell Genet. 84:211-216(1999).

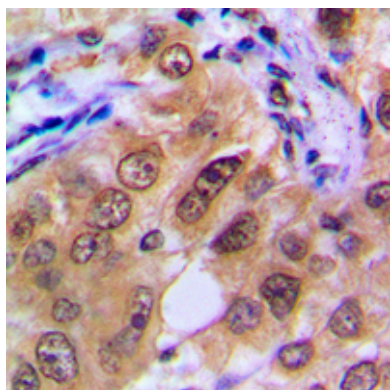
Kakar S.S.,et al.Gene 240:317-324(1999).

Zhang X.,et al.Mol. Endocrinol. 13:156-166(1999).

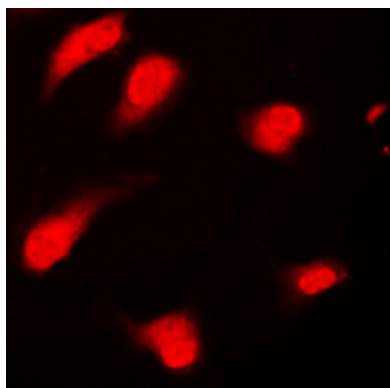
Images



Western blot analysis of PTTG1/2/3 expression in HepG2 (A), Jurkat (B), NIH3T3 (C) whole cell lysates. (Predicted band size: 22 kD; Observed band size: 29 kD)



Immunohistochemical analysis of PTTG1/2/3 staining in human breast cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of PTTG1/2/3 staining in Jurkat cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark.

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