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APITD1 Antibody (Center) Blocking Peptide

Synthetic peptide
Catalog # BP4921c

Specification

APITD1 Antibody (Center) Blocking Peptide - Product Information

Primary Accession Q8N2Z9

APITD1 Antibody (Center) Blocking Peptide - Additional Information

Gene ID 100526739;378708

Other Names
Centromere protein S, CENP-S, Apoptosis-inducing TAF9-like domain-containing protein 1, FANCM-interacting histone fold protein 1, Fanconi anemia-associated polypeptide of 16 kDa, APITD1, CENPS, FAAP16, MHF1

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

APITD1 Antibody (Center) Blocking Peptide - Protein Information

Name CENPS

Function
DNA-binding component of the Fanconi anemia (FA) core complex. Required for the normal activation of the FA pathway, leading to monoubiquitination of the FANCI-FANCD2 complex in response to DNA damage, cellular resistance to DNA cross-linking drugs, and prevention of chromosomal breakage (PubMed:20347428, PubMed:20347429). In complex with CENPX (MHF heterodimer), crucial cofactor for FANCM in both binding and ATP-dependent remodeling of DNA. Stabilizes FANCM (PubMed:20347428, PubMed:20347429). In complex with CENPX and FANCM (but not other FANC proteins), rapidly recruited to blocked forks and promotes gene conversion at blocked replication forks (PubMed:20347428). In complex with CENPT, CENPW and CENPX (CENP-T-W-S-X heterotetramer), involved in the formation of a functional kinetochore outer plate, which is essential for kinetochore-microtubule attachment and faithful mitotic progression (PubMed:19620631). As a component of MHF and CENP-T-W-S-X complexes, binds

DNA and bends it to form a nucleosome-like structure (PubMed:20347428, PubMed:22304917). DNA- binding function is fulfilled in the presence of CENPX, with the following preference for DNA substates: Holliday junction > double- stranded > splay arm > single-stranded. Does not bind DNA on its own (PubMed:20347428, PubMed:20347429).

Cellular Location
Nucleus. Chromosome, centromere Chromosome, centromere, kinetochore Note=Assembly of CENPS and CENPX and its partner subunits CENPT and CENPW at centromeres occurs through a dynamic exchange mechanism Although exchange is continuous in the cell cycle, de novo assembly starts principally during mid-late S phase and is complete by G2. CENPS is more stably bound at the kinetochore than CENPX (PubMed:19620631, PubMed:24522885). During S phase, rapidly recruited to DNA interstrand cross-links that block replication (PubMed:20347428). Recruited to DNA damage sites about 20 minutes following UV irradiation, reaching a plateau after approximately 40 minutes (PubMed:24522885)

Tissue Location
Ubiquitously expressed.

APITD1 Antibody (Center) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

APITD1 Antibody (Center) Blocking Peptide - Images

APITD1 Antibody (Center) Blocking Peptide - Background

APITD1 was identified in the neuroblastoma tumour suppressor candidate region on chromosome 1p36. It contains a TFIID-31 domain, similar to that found in TATA box-binding protein-associated factor, TAF(II)31, which is required for p53-mediated transcription activation. This gene was expressed at very low levels in neuroblastoma tumours, and was shown to reduce cell growth in neuroblastoma cells, suggesting that it may have a role in a cell death pathway.

APITD1 Antibody (Center) Blocking Peptide - References

Amano, M., et al. J. Cell Biol. 186(2):173-182(2009)van Gils, W., et al. Invest. Ophthalmol. Vis. Sci. 48(11):4919-4923(2007)Okada, M., et al. Nat. Cell Biol. 8(5):446-457(2006)