

Rat microtubule-associated protein tau ELISA Kit | MAPT elisa kit

Rat Tau Proteins ELISA Kit

CATALOG #
AAA79758

REACTIVITY
Rat

PRODUCT SYNONYMS

microtubule-associated protein tau; Rat Tau Proteins ELISA Kit; Rat Tau Proteins ELISA kit; DDPAC; FLJ31424; FTDP-17; MAPTL; MGC138549; MSTD; MTBT1; MTBT2; PPND; TAU; G protein beta1/gamma2 subunit-interacting factor 1; isoform 4; MAPT elisa kit

PRODUCT SPECIFICATIONS

Reactivity	Rat
Specificity	This assay has high sensitivity and excellent specificity for detection of Rat MAPT. No significant cross-reactivity or interference between Rat MAPT and analogues was observed.
Sequence Length	752
Samples	Serum, plasma, cerebrospinal fluid (CSF)
Detection Range	62.5 pg/ml-4000 pg/ml
Sensitivity	15.6 pg/ml
Intra-assay Precision	Intra-assay Precision (Precision within an assay): CV% is less than 8% Three samples of known concentration were tested twenty times on one plate to assess. Inter-assay Precision (Precision between assays): CV% is less than 10% Three samples of known concentration were tested in twenty assays to assess.
Detection Wavelength	450 nm
Sample Volume	50-100ul
Preparation and Storage	Unopened test kits should be stored at 2 to 8 degree C upon receipt. Please refer to pdf manual for further storage instructions.

IMAGES



Standard Curve (Sample)

ADDITIONAL INFORMATION

Related Product Information for MAPT elisa kit	Introduction: Tau proteins are microtubule-associated proteins that are abundant in neurons in the central nervous system and are less common elsewhere. They were discovered in 1975 in Marc Kirschner's laboratory at Princeton University. Tau proteins interact with tubulin to stabilize microtubules and promote tubulin assembly into microtubules. Tau has two ways of controlling microtubule stability: isoforms and phosphorylation. Six tau isoforms exist in brain tissue, and they are distinguished by their number of binding domains. Three isoforms have three binding domains and the other three have four binding domains. The binding domains are located in the carboxy-terminus of the protein and are positively-charged (allowing it to bind to the negatively-charged microtubule). The isoforms with four binding domains are better at stabilizing microtubules than those with three binding domains. The isoforms are a result of alternative splicing in exons 2,3, and 10 of the tau gene. Phosphorylation of tau is regulated by a host of kinases. For example, PKN, a serine/threonine kinase. When PKN is activated, it phosphorylates tau, resulting in disruption of microtubule organization. Hyperphosphorylation of the tau protein (tau inclusions), however, can result in the self-assembly of tangles of paired helical filaments and straight filaments, which are involved in the pathogenesis of Alzheimer's disease and other tauopathies. Tau protein is a highly soluble microtubule-associated protein (MAP). These proteins are mostly found in neurons compared to non-neuronal cells. One of tau's main functions is to modulate the stability of axonal microtubules. Tau is not present in dendrites and is active primarily in the distal portions of axons where it provides microtubule stabilization but also flexibility as needed. This contrasts with STOP proteins in the proximal portions of axons which essentially lock down the microtubules and MAP2 that stabilizes microtubules in dendrites. The tau gene locates on chromosome 17q21, containing 16 exons. All of the six tau isoforms are present in an often hyperphosphorylated state in paired helical filaments from Alzheimer's Disease brain. In other neurodegenerative diseases, the deposition of aggregates enriched in certain tau isoforms has been reported. When misfolded this otherwise very soluble protein can form extremely insoluble aggregates that contribute to a number of neurodegenerative diseases. Principle of the Assay: The microtiter plate provided in this kit has been pre-coated with an antibody specific to Tau Proteins. Standards or samples are then added to the appropriate microtiter plate wells with abiotin-conjugated antibody preparation specific for Tau Proteins and Avidin conjugated to Horseradish Peroxidase (HRP) is added to each microplate well and incubated. Then a TMB (3,3',5,5' tetramethyl-benzidine) substrate solution is added to each well. Only those wells that contain Tau Proteins, biotin-conjugated antibody and enzyme-conjugated Avidin will exhibit a change in color. The enzyme-substrate reaction is terminated by the addition of a sulphuric acid solution and the color change is measured spectrophotometrically at a wavelength of 450 nm +/- 2 nm. The concentration of Tau Proteins in the samples is then determined by comparing the O.D. of the samples to the standard curve.
--	--

NCBI AND UNIPROT INFORMATION

NCBI GI #	13432197
NCBI GeneID	29477
UniProt Accession #	P19332; Q63567; Q63677; Q9QW06
Molecular Weight	78,564 Da
NCBI Official Full Name	Microtubule-associated protein tau
NCBI Official Synonym Full Names	microtubule-associated protein tau
NCBI Official Symbol	Mapt
NCBI Official Synonym Symbols	pTau; Mtap; RNPTAU
NCBI Protein Information	microtubule-associated protein tau; PHF-tau; paired helical filament-tau; neurofibrillary tangle protein; Tau microtubule-associated protein
UniProt Protein Name	Microtubule-associated protein tau
UniProt Gene Name	Mapt
UniProt Synonym Gene Names	Mtap; Tau; PHF-tau
UniProt Entry Name	TAU_RAT

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

