TK1 Antibody – Mouse Monoclonal

PRODUCT OVERVIEW

Product Name	TK1, Monoclonal Antibody
Full Product Name	TK1 (Thymidine Kinase 1, Soluble, TK2) (AP)
Product Gene Name	anti-TK1 antibody
Product Synonym Names	Thymidine Kinase 1; Soluble; TK2
Clonality	Monoclonal
Isotype	IgG2a,k
Clone Number	1F12
Host	Mouse
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Alkaline Phosphatase (AP).
Purity/Purification	Purified
Specificity	Recognizes TK1.
Preparation and Storage	Store product at 4 degree C. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	28.0 kDa (258aa) confirmed by MALDI-TOF
OMIM	188300
3D Structure	ModBase 3D Structure for P04183
Immunogen	TK1 (NP_003249, 157aa-234aa) partial recombinant protein with GST tag. MW of the GST tag alone is 26kD.
Immunogen Sequence	FREAAYTKRLGTEKEVEVIGGADKYHSVCRLCYFKKASGQPAGPDNKENCPVPGKPGEAVAARKLFAPQQILQCSPAN
Conjugate	AP
Product Categories/Family for anti-TK1 antibody	Antibodies; Protein Kinases
Applications Tested/Suitable for anti-TK1 antibody	ELISA (EIA), Western Blot (WB)
Application Notes for anti-TK1 antibody	Applications are based on unconjugated antibody.
Related Product Information for anti-TK1 antibody	MBS6164255 is an antibody targeting TK1. Also known as TK1 (Thymidine Kinase 1, Soluble, TK2) (AP). Host: Mouse. Mouse monoclonal antibody raised against a partial recombinant TK1.
Other Notes	Small volumes of anti-TK1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for TK1. It may not necessarily be applicable to this product.

NCBI GI #	164698438

NCBI GeneID	7083
NCBI Accession #	NP_003249
UniProt Primary Accession #	P04183
UniProt Secondary Accession #	Q969V0; Q9UMG9; B2RC58
UniProt Related Accession #	P04183
GenBank Nucleotide #	NM_003258.4
NCBI Official Full Name	thymidine kinase, cytosolic isoform 1
NCBI Official Synonym Full Names	thymidine kinase 1
NCBI Official Symbol	TK1
NCBI Official Synonym Symbols	TK2
UniProt Protein Name	Thymidine kinase, cytosolic
Protein Family	Thymidine kinase
UniProt Gene Name	TK1
UniProt Entry Name	KITH_HUMAN
NCBI Protein Information	thymidine kinase, cytosolic
NCBI Summary for TK1	The protein encoded by this gene is a cytosolic enzyme that catalyzes the addition of a gamma-phosphate group to thymidine. This creates dTMP and is the first step in the biosynthesis of dTTP, which is one component required for DNA replication. The encoded protein, whose levels fluctuate depending on the cell cycle stage, can act as a low activity dimer or a high activity tetramer. High levels of this protein have been used as a biomarker for diagnosing and categorizing many types of cancers. [provided by RefSeq, Oct 2016]
UniProt Comments for TK1	TK: cytosolic thymidine kinase. Phosphorylated during mitosis. Its enzymatic activity is high in proliferating cells and peaks during the S-phase of the cell cycle; it is very low in resting cells. Protein type: Nucleotide Metabolism - pyrimidine; EC 2.7.1.21; Xenobiotic Metabolism - drug metabolism - other enzymes; Kinase, other Chromosomal Location of Human Ortholog: 17q23.2-q25.3 Cellular Component: cytosol Molecular Function: identical protein binding; nucleoside kinase activity; zinc ion binding; thymidine kinase activity; ATP binding Biological Process: response to nutrient levels; skeletal muscle cell proliferation; nucleobase, nucleoside and nucleotide metabolic process; response to toxin; liver development; fetal process involved in parturition; deoxyribonucleoside monophosphate biosynthetic process; protein homotetramerization; response to cortisol stimulus; pyrimidine base metabolic process; gut development; response to copper ion; nucleotide biosynthetic process; nucleobase, nucleoside, nucleotide and nucleic acid metabolic process; thymidine metabolic process; pyrimidine nucleoside salvage; phosphorylation
Research Articles on TK1	**1.** The results have implications for the mechanism by which Fhit regulates TK1 mRNA, and more broadly, for its modulation of multiple functions as tumor suppressor/genome caretaker.
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