

**Thymidine Kinase 2 Antibody (N-term)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP7062a****Specification**

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**Thymidine Kinase 2 Antibody (N-term) - Product Information**

Application	WB,E
Primary Accession	<a href="#">O00142</a>
Reactivity	Human, Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	31005
Antigen Region	8-38

**Thymidine Kinase 2 Antibody (N-term) - Additional Information****Gene ID** 7084**Other Names**

Thymidine kinase 2, mitochondrial, Mt-TK, TK2

**Target/Specificity**

This Thymidine Kinase 2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 8-38 amino acids from the N-terminal region of human Thymidine Kinase 2.

**Dilution**

WB~~1:1000

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Thymidine Kinase 2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**Thymidine Kinase 2 Antibody (N-term) - Protein Information****Name** TK2 {ECO:0000303|PubMed:9989599, ECO:0000312|HGNC:HGNC:11831}**Function** Phosphorylates thymidine, deoxycytidine, and deoxyuridine in the mitochondrial matrix (PubMed:[9989599](#), PubMed:[11687801](#)). In non- replicating cells, where cytosolic dNTP synthesis is

down-regulated, mtDNA synthesis depends solely on TK2 and DGUOK (PubMed:[9989599](#)). Widely used as target of antiviral and chemotherapeutic agents (PubMed:[9989599](#)).

**Cellular Location**

Mitochondrion.

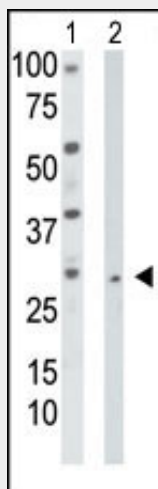
**Tissue Location**

Predominantly expressed in liver, pancreas, muscle, and brain.

**Thymidine Kinase 2 Antibody (N-term) - Protocols**

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**Thymidine Kinase 2 Antibody (N-term) - Images**

The anti-TK2 Pab (Cat. #AP7062a) is used in Western blot to detect TK2 in HepG2 cell lysate (Lane 1) and mouse liver tissue lysate (Lane 2).

**Thymidine Kinase 2 Antibody (N-term) - Background**

Thymidine kinase-2 (TK2) is a deoxyribonucleoside kinase that phosphorylates thymidine, deoxycytidine, and deoxyuridine, and also phosphorylates antiviral and anticancer nucleoside analogs. Both recombinant and native forms of the enzyme have broad substrate specificity and complex kinetics, suggesting that it may play a role in the activation of chemotherapeutic nucleoside analogs. The highest levels of expression are observed in testis and ovary. The main supply of deoxyribonucleotides (dNTPs) for mitochondrial DNA synthesis comes from the salvage pathway initiated by deoxyguanosine kinase (DGK) and TK2. The association of mitochondrial DNA depletion with mutations in the genes encoding these 2 kinases suggests that the salvage pathway enzymes are involved in the maintenance of balanced mitochondrial dNTP pools.