10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

TIMELESS antibody - N-terminal region

Rabbit Polyclonal Antibody
Catalog # AI11409

Product Information

Application	WB
Primary Accession	Q9UNS1
Other Accession	NM_003920, NP_003911
Reactivity	Human, Mouse, Rat, Rabbit, Zebrafish, Pig, Dog, Horse, Bovine, Sheep
Predicted	Human, Mouse, Rat, Rabbit, Pig, Dog, Horse, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	138658

Additional Information

Gene ID	8914
Alias Symbol	TIM, TIM1, hTIM
Other Names	Protein timeless homolog, hTIM, TIMELESS {ECO:0000312|EMBL:AAH50557.1}
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 100 ul of distilled water. Final anti-TIMELESS antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	TIMELESS antibody - N-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TIMELESS {ECO:0000312|EMBL:AAH50557.1}
Function	Plays an important role in the control of DNA replication, maintenance of replication fork stability, maintenance of genome stability throughout normal DNA replication, DNA repair and in the regulation of the circadian clock (PubMed:17141802, PubMed:17296725, PubMed:23359676, PubMed:23418588, PubMed:26344098, PubMed:31138685, PubMed:32705708, PubMed:35585232, PubMed:9856465). Required to stabilize replication forks during DNA replication by forming a complex with TIPIN: this complex regulates DNA replication processes under both normal and stress conditions, stabilizes replication forks and influences both CHEK1 phosphorylation and the intra-S phase checkpoint in response to genotoxic stress (PubMed:17141802, PubMed:17296725, PubMed:23359676,

PubMed:35585232). During DNA replication, inhibits the CMG complex ATPase activity and activates DNA polymerases catalytic activities, coupling DNA unwinding and DNA synthesis (PubMed:23359676). TIMELESS promotes TIPIN nuclear localization (PubMed:17141802, PubMed:17296725). Plays a role in maintaining processive DNA replication past genomic guanine-rich DNA sequences that form G- quadruplex (G4) structures, possibly together with DDX1 (PubMed:32705708). Involved in cell survival after DNA damage or replication stress by promoting DNA repair (PubMed:17141802, PubMed:17296725, PubMed:26344098, PubMed:30356214). In response to double-strand breaks (DSBs), accumulates at DNA damage sites and promotes homologous recombination repair via its interaction with PARP1 (PubMed:26344098, PubMed:30356214, PubMed:31138685). May be specifically required for the ATR-CHEK1 pathway in the replication checkpoint induced by hydroxyurea or ultraviolet light (PubMed:15798197). Involved in the determination of period length and in the DNA damage-dependent phase advancing of the circadian clock (PubMed:23418588, PubMed:31138685). Negatively regulates CLOCK|NPAS2- ARTNL/BMAL1|ARTNL2/BMAL2-induced transactivation of PER1 possibly via translocation of PER1 into the nucleus (PubMed:31138685, PubMed:9856465). May play a role as destabilizer of the PER2-CRY2 complex (PubMed:31138685). May also play an important role in epithelial cell morphogenesis and formation of branching tubules (By similarity).

Cellular Location

Nucleus. Chromosome Note=In response to double-strand breaks (DSBs), accumulates at DNA damage sites via its interaction with PARP1

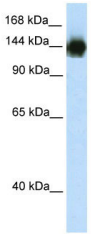
Tissue Location

Expressed in all tissues examined including brain, heart, lung, liver, skeletal muscle, kidney, placenta, pancreas, spleen, thymus and testis. Highest levels of expression in placenta, pancreas, thymus and testis.

References

Murre,C., (2005) Mol. Cell. Biol. 25 (8), 3109-3116Reconstitution and Storage:For short term use, store at 2-8C up to 1 week. For long term storage, store at -20C in small aliquots to prevent freeze-thaw cycles.

Images



WB Suggested Anti-TIMELESS Antibody Titration: 2.5µg/ml
ELISA Titer: 1:312500
Positive Control: Transfected 293T