

TORC1 (Phospho Ser151) Rabbit pAb

CatalogNo: YP1534 **Orthogonal Validated** 

Key Features

Host Species

- Rabbit

Reactivity

- Human, Mouse, Rat

Applications

- WB

MW

- 70kD (Observed)

Isotype

- IgG

Storage

Storage* -15°C to -25°C/1 year (Do not lower than -25°C)

Formulation Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.

Recommended Dilution Ratios

WB 1:1000-2000

Basic Information

Clonality Polyclonal

Immunogen Information

Immunogen Synthesized phospho peptide around human TORC1 and CRT1 (Ser151)

Specificity This antibody detects endogenous levels of Human TORC1 or CRT1 (phospho-Ser151). The name of modified sites may be influenced by many factors, such as species (the modified site was not originally found in human samples) and the change of protein sequence (the previous protein sequence is incomplete, and the protein sequence may be prolonged with the development of protein sequencing technology). When naming, we will use the "numbers" in historical reference to keep the sites consistent with the reports. The antibody binds to the following modification sequence (lowercase letters are modification sites): TNsDS

Target Information

Gene name CRTC1 KIAA0616 MECT1 TORC1 WAMTP1

Protein Name TORC1/CRTC1 (Ser151)

Organism	Gene ID	UniProt ID
Human	23373 ;	Q6UUV9 ;
Mouse	382056 ;	Q68ED7 ;
Rat	684527 ;	Q157S1 ;

Cellular Localization

Cytoplasm . Nucleus . Cytoplasmic when phosphorylated by SIK or AMPK and when sequestered by 14-3-3 proteins (PubMed:16817901) . Translocated to the nucleus on Ser-151 dephosphorylation , instigated by a number of factors including calcium ion and cAMP levels (PubMed:15589160) . Light stimulation triggers a nuclear accumulation in the suprachiasmatic nucleus (SCN) of the brain (By similarity) . .

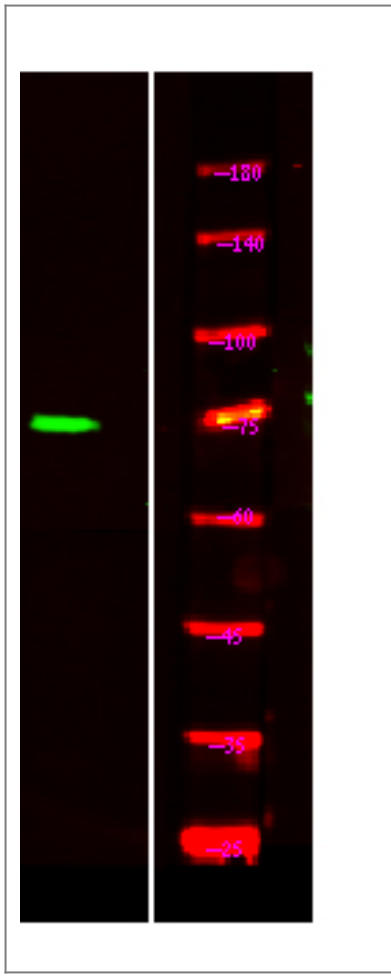
Tissue specificity

Highly expressed in adult and fetal brain. Located to specific regions such as the prefrontal cortex and cerebellum. Very low expression in other tissues such as heart , spleen , lung , skeletal muscle , salivary gland , ovary and kidney.

Function

Disease:A chromosomal aberration involving CRTC1 is found in mucoepidermoid carcinomas , benign Warthin tumors and clear cell hidradenomas. Translocation t (11;19) (q21;p13) with MAML2. The fusion protein consists of the N-terminus of CRTC1 joined to the C-terminus of MAML2. The reciprocal fusion protein consisting of the N-terminus of MAML2 joined to the C-terminus of CRTC1 has been detected in a small number of mucoepidermoid carcinomas. ,Function:Transcriptional coactivator for CREB1 which activates transcription through both consensus and variant cAMP response element (CRE) sites. Acts as a coactivator , in the SIK/TORC signaling pathway , being active when dephosphorylated and acts independently of CREB1 'Ser-133' phosphorylation. Enhances the interaction of CREB1 with TAF4. Regulates the expression of specific CREB-activated genes such as the steroidogenic gene , StAR. Potent coactivator of PGC1alpha and inducer of mitochondrial biogenesis in muscle cells. Also coactivator for TAX activation of the human T-cell leukemia virus type 1 (HTLV-1) long terminal repeats (LTR) . In the hippocampus , involved in late-phase long-term potentiation (L-LTP) maintenance at the Schaffer collateral-CA1 synapses. ,PTM:Phosphorylation/dephosphorylation states of Ser-151 are required for regulating transduction of CREB activity. TORCs are inactive when phosphorylated , and active when dephosphorylated at this site. This primary site of phosphorylation , is regulated by cAMP and calcium levels and is dependent on the phosphorylation of SIKs by LKB1 (By similarity) . Phosphorylated upon DNA damage , probably by ATM or ATR. ,similarity:Belongs to the TORC family. ,subcellular location:Cytoplasmic when phosphorylated by SIK or AMPK and when sequestered by 14-3-3 proteins (By similarity) . Translocated to the nucleus on Ser-151 dephosphorylation , instigated by a number of factors including calcium ion and cAMP levels. ,subunit:Binds , as a tetramer , through its N-terminal region , with the bZIP domain of CREB1. 'Arg-314' in the bZIP domain of CREB1 is essential for this interaction. Interaction , via its C-terminal , with TAF4 , enhances recruitment of TAF4 to CREB1. Binds HTLV1 Tax. ,tissue specificity:Highly expressed in adult and fetal brain. Located to specific regions such as the prefrontal cortex and cerebellum. Very low expression in other tissues such as heart , spleen , lung , skeletal muscle , salivary gland , ovary and kidney. ,

Validation Data



Western Blot analysis of HeLa treated or untreated by LPS lysis, using primary antibody at 1:1000 dilution. Secondary antibody (catalog#:RS23920) was diluted at 1:10000

Contact information

Orders: order.cn@immunoway.com
Support: support.cn@immunoway.com
Telephone: 400-8787-807(China)
Website: <http://www.immunoway.com.cn>
Address: 2200 Ringwood Ave San Jose, CA 95131 USA



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