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[Marker Primary Antibody]

Rabbit Anti-CLK2/HRP Conjugated antibody

Catalog Number: SL7907R-HRP

FOR RESEARCH USE ONLY

[DATASHEET]

Host:	Rabbit
Isotype:	IgG
Clonality:	Polyclonal
Target:	Anti-CLK2/HRP
Immunogen:	KLH conjugated synthetic peptide derived from human CLK2
Purification:	affinity purified by Protein A
Concentration:	1mg/ml
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
Applications:	WB=1:500-2000 IHC-P=1:100-500 IHC-F=1:100-500 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Reactivity:	Human,Mouse,Rat(predicted:Chicken,Dog,Pig,Cow,Horse,Rabbit)
Background:	background: CDC-like kinase 2 (CLK2) belongs to a family of autophosphorylating kinases termed CLK (CDC2/CDC28-like kinases), which have been shown to phosphorylate serine- and arginine-rich (SR) proteins of the spliceosomal complex, and to influence alternative splicing in overexpression systems. Recent findings demonstrated that the CLK kinases activate PTP-1B family members, and this phosphatase may be an important cellular target for CLK action. Mutations in the CLK2 proteins affect organismal features such as development, behavior, reproduction, and aging as well as cellular features such as the cell cycle, apoptosis, the DNA replication checkpoint, and telomere length. **Function:** Dual specificity kinase acting on both serine/threonine and tyrosine-containing substrates. Phosphorylates serine- and arginine-rich (SR) proteins of the spliceosomal complex. May be a constituent of a network of

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	regulatory mechanisms that enable SR proteins to control RNA splicing and can cause redistribution of SR proteins from speckles to a diffuse nucleoplasmic distribution. Acts as a suppressor of hepatic gluconeogenesis and glucose output by repressing PPARGC1A transcriptional activity on gluconeogenic genes via its phosphorylation. Phosphorylates PPP2R5B thereby stimulating the assembly of PP2A phosphatase with the PPP2R5B-AKT1 complex leading to dephosphorylation of AKT1. Phosphorylates: PTPN1, SRSF1 and SRSF3. Regulates the alternative splicing of tissue factor (F3) pre-mRNA in endothelial cells. **Subunit:** Interacts with RBMX. Interacts with AKT1 and UBL5. **Subcellular Location:** Isoform 1: Nucleus. Nucleus speckle. Isoform 2: Nucleus speckle. **Tissue Specificity:** Endothelial cells. **Post-translational modifications:** Autophosphorylates on all three types of residues. Phosphorylation on Ser-34 and Thr-127 by AKT1 is induced by ionizing radiation or insulin. Phosphorylation plays a critical role in cell proliferation following low dose radiation and prevents cell death following high dose radiation. Phosphorylation at Thr-344 by PKB/AKT2 induces its kinase activity which is required for its stability. The phosphorylation status at Ser-142 influences its subnuclear localization; inhbition of phosphorylation at Ser-142 results in accumulation in the nuclear speckle. **Similarity:** Belongs to the protein kinase superfamily. CMGC Ser/Thr protein kinase family. Lammer subfamily. Contains 1 protein kinase domain. **Database links:** UniProtKB/Swiss-Prot: P49760.1 Important **Note:** This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.