

ARG66787 anti-CLK2 antibody

Package: 100 µg
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes CLK2
Tested Reactivity	Hu
Tested Application	IHC-P, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	CLK2
Species	Human
Immunogen	Synthetic peptide between aa. 1-50 of Human CLK2.
Conjugation	Un-conjugated
Alternate Names	CDC-like kinase 2; Dual specificity protein kinase CLK2; EC 2.7.12.1

Application Instructions

Application table	Application	Dilution
	IHC-P	1:100 - 1:300
	WB	1:500 - 1:2000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	
Positive Control	COLO205 and A549	
Observed Size	~ 60 kDa	

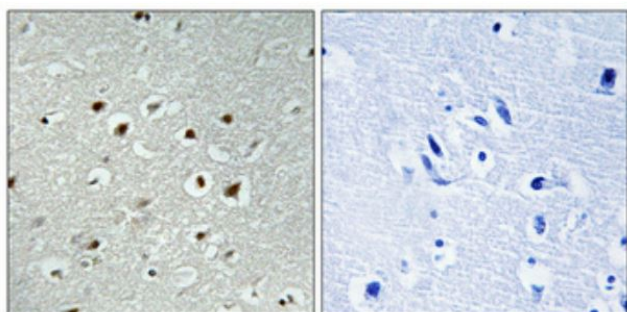
Properties

Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	PBS, 0.02% Sodium azide, 50% Glycerol and 0.5% BSA.
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol and 0.5% BSA
Concentration	1 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

Bioinformation

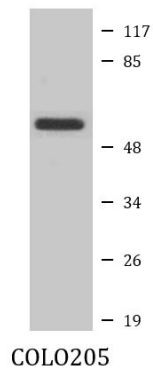
Gene Symbol	CLK2
Gene Full Name	CDC-like kinase 2
Background	This gene encodes a dual specificity protein kinase that phosphorylates serine/threonine and tyrosine-containing substrates. Activity of this protein regulates serine- and arginine-rich (SR) proteins of the spliceosomal complex, thereby influencing alternative transcript splicing. Chromosomal translocations have been characterized between this locus and the PAFAH1B3 (platelet-activating factor acetylhydrolase 1b, catalytic subunit 3 (29kDa)) gene on chromosome 19, resulting in the production of a fusion protein. Note that this gene is distinct from the Telo2 gene (GeneID:9894), which shares the CLK2 alias, but encodes a protein that is involved in telomere length regulation. There is a pseudogene for this gene on chromosome 7. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Jun 2014]
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 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. Phosphorylates PAGE4 at several serine and threonine residues and this phosphorylation attenuates the ability of PAGE4 to potentiate the transcriptional activator activity of JUN (PubMed:28289210). [UniProt]
Calculated Mw	60 kDa
PTM	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; inhibition of phosphorylation at Ser-142 results in accumulation in the nuclear speckle. [UniProt]
Cellular Localization	Isoform 1: Nucleus. Nucleus speckle. Note=Inhibition of phosphorylation at Ser-142 results in accumulation in the nuclear speckle. Isoform 2: Nucleus speckle. Note=Co-localizes with serine- and arginine-rich (SR) proteins in the nuclear speckles. [UniProt]

Images



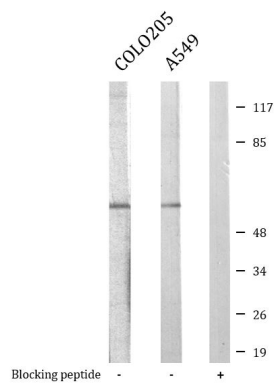
ARG66787 anti-CLK2 antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human brain tissue. Antigen Retrieval: Tris/EDTA buffer (pH 8.0) at high pressure and temperature. The tissue section was stained with ARG66787 anti-CLK2 antibody at 1:100 dilution, overnight at 4°C. Negative control (right): Antibody was pre-absorbed by immunogen peptide.



ARG66787 anti-CLK2 antibody WB image

Western blot: COLO205 cell nucleus lysate stained with ARG66787 anti-CLK2 antibody.



ARG66787 anti-CLK2 antibody WB image

Western blot: COLO205 and A549 cell lysates stained with ARG66787 anti-CLK2 antibody. The lane on the right is blocked with the synthetic peptide.