

ARG52239 anti-CDK1 / CDC2 phospho (Tyr15) antibody

Package: 50 µl
Store at: -20°C

Summary

Product Description	Rabbit Polyclonal antibody recognizes CDK1 / CDC2 phospho (Tyr15)
Tested Reactivity	Hu, Xenopus laevis
Predict Reactivity	Ms, Rat, Zfsh
Tested Application	WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	CDK1 / CDC2
Species	Rat
Immunogen	Synthetic phospho-peptide corresponding to amino acid residues surrounding Tyr15 conjugated to KLH
Conjugation	Un-conjugated
Alternate Names	CDK1; Cyclin Dependent Kinase 1; CDC28A; CDC2; Cell Division Cycle 2, G1 To S And G2 To M; Cell Division Control Protein 2 Homolog; Cell Division Protein Kinase 1; Cyclin-Dependent Kinase 1; P34 Protein Kinase; P34CDC2; Cell Cycle Controller CDC2; EC 2.7.11.22; EC 2.7.11.23; CDKN1

Application Instructions

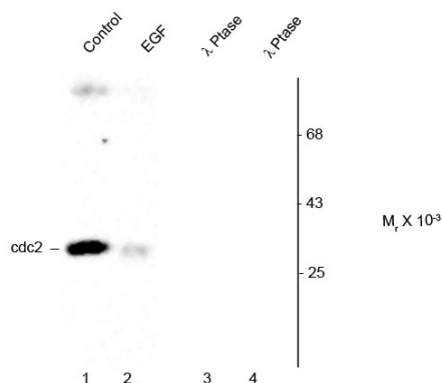
Application table	Application	Dilution
	WB	1:1,000
Application Note	<p>Specific for the ~38k cdc2 protein phosphorylated at Tyr15. Immunolabeling is blocked by the λ-phosphatase treatment.</p> <p>* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.</p>	

Properties

Form	Liquid
Purification	Affinity Purified
Buffer	10 mM HEPES (pH 7.5), 150 mM NaCl, 0.1 mg/ml BSA and 50% Glycerol
Stabilizer	0.1 mg/ml BSA, 50% Glycerol
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.
Note	For laboratory research only, not for drug, diagnostic or other use.

Database links	GeneID: 983 Human Swiss-port # P06493 Human
Gene Symbol	CDK1
Gene Full Name	cyclin-dependent kinase 1
Background	The protein encoded by this gene is a member of the Ser/Thr protein kinase family. This protein is a catalytic subunit of the highly conserved protein kinase complex known as M-phase promoting factor (MPF), which is essential for G2/M phase transitions of eukaryotic cell cycle. Mitotic cyclins stably associate with this protein and function as regulatory subunits. The kinase activity of this protein is controlled by cyclin accumulation and destruction through the cell cycle. The phosphorylation and dephosphorylation of this protein also play important regulatory roles in cell cycle control. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, May 2023]
Function	Plays a key role in the control of the eukaryotic cell cycle by modulating the centrosome cycle as well as mitotic onset; promotes G2-M transition via association with multiple interphase cyclins. [UniProt]
Research Area	Cell Biology and Cellular Response antibody; Gene Regulation antibody; Neuroscience antibody
Calculated Mw	34 kDa
PTM	Phosphorylation at Thr-14 and Tyr-15 by PKMYT1 prevents nuclear translocation. Phosphorylation at Tyr-15 by WEE1 and WEE2 inhibits the protein kinase activity and acts as a negative regulator of entry into mitosis (G2 to M transition). Dephosphorylation by active CDC25A and CDC25B at Thr-14 and Tyr-15, leads to CDK1 activation at the G2-M transition. Phosphorylation at Tyr-15 by WEE2 during oogenesis is required to maintain meiotic arrest in oocytes during the germinal vesicle (GV) stage, a long period of quiescence at dictyate prophase I, leading to prevent meiotic reentry. In response to UV irradiation, phosphorylation at Tyr-15 by PRKCD activates the G2/M DNA damage checkpoint. [UniProt]
Cellular Localization	Cytoplasm, Cytoskeleton, Mitochondrion, Nucleus. [UniProt]

Images



ARG52239 anti-CDK1 / CDC2 phospho (Tyr15) antibody WB image

Western blot: Human T47D cells showing phospho-specific immunolabeling of the ~34 kDa CDC2 protein phosphorylated at Tyr15. In lane 2, cells were treated with EGF leading to dephosphorylation of Tyr15 stained with ARG52239 anti-CDK1 / CDC2 phospho (Tyr15) antibody.