Human/Mouse/Rat CDK2 Alexa Fluor® 700-conjugated Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF4654N
100 µg

DESCRIPTION

Species Reactivity	Human/Mouse/Rat
Specificity	Detects human, mouse, and rat CDK2 in Western blots. In Western blots, less than 1% cross-reactivity with recombinant human (rh) CDK4 and rhCDK6 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	*E. coli*-derived recombinant human CDK2 Met1-Leu298 Accession # P24941
Conjugate	Alexa Fluor 700 Excitation Wavelength: 675-700 nm Emission Wavelength: 723 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

Western Blot	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.
Immunohistochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

CDK2 (cyclin-dependent kinase 2), a serine/threonine protein kinase, is the catalytic subunit of the heterodimeric cyclin-dependent kinase complex required for G1/S phase transition. The kinase activity of CDK2 is regulated by the association with a cyclin subunit, CDK inhibitors, and its phosphorylation state. The active CDK2/cyclin A complex interacts with the N-terminus of E2F-1 and directs the phosphorylation of E2F-1 and DP-1. The active CDK2/cyclin E complex phosphorylates Rb which disrupts its binding to E2F, allowing E2F activation and transcription of the genes necessary for S-phase entry and progression. Inhibition of the CDK2/cyclin complex can be attributed to its association with $p21^{Waf1/Cip1}$ and $p27^{Kip1}$ and the phosphorylation of CDK2 on Thr14 and Tyr15. The activation of the CDK2/cyclin complex requires the phosphorylation of Thr160 and the dephosphorylation of Tyr14 and Tyr15.

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