

# Anti-pTpY Cdk1 [CP3.2]

**Catalogue number:** 151684

**Sub-type:** Primary antibody

**Images:**

## Contributor

**Inventor:** Julian Gannon

**Institute:** Cancer Research UK, London Research Institute: Clare Hall Laboratories

**Images:**

## Tool details

**\*FOR RESEARCH USE ONLY**

**Name:** Anti-pTpY Cdk1 [CP3.2]

**Alternate name:** Cyclin-Dependent Kinase 1; Cell Division Cycle 2, G1 To S And G2 To M; Cell Division Protein Kinase 1; P34 Protein Kinase; P34CDC2; CDC28A; Cell Cycle Controller CDC2; CDKN1

**Class:** Monoclonal

**Conjugate:** Unconjugated

**Description:** Cyclin dependent kinase 1 (Cdk1) regulates cell cycle progression. It is active as a heterodimeric complex with cyclins. Cdk1 associates with cyclin A at the end of S phase and targets proteins such as p53, BARD1, and BRCA2 involved in cell cycle progression, and others involved in DNA replication. At the end of the G2 phase, Cdk1 associates with cyclin B1 and B2 to phosphorylate multiple protein targets required for transition from G2 to M phase, and progression through M phase. Cdk1 itself undergoes phosphorylation at Thr14 and Tyr15 by PKMYT1, which prevents nuclear translocation of Cdk1. Cdk1 is also phosphorylated at Tyr15 by WEE1/2 which inhibits both Cdk1 activity and transition from G2 to M phase. Conversely, dephosphorylation of Thr14 and Tyr15 by CDC25A/B activates Cdk1 and triggers mitosis. Cdk1 may also regulate epigenetic gene silencing through phosphorylation of EZH2 and maintenance of histone H3 lysine 27 trimethylation, which has been implicated in cancer

**Purpose:**

**Parental cell:**

**Organism:**

**Tissue:**

**Model:**

**Gender:**

**Isotype:** IgG1

**Reactivity:** Mammalian ; Xenopus laevis

**Selectivity:**

**Host:** Mouse

**Immunogen:** Peptide - EKIGEGpTpYGVVYKGC - pT represents phosphorylated Thr14 and pY represents phosphorylated Tyr15

**Immunogen UNIPROT ID:**

**Sequence:**

**Growth properties:**

**Production details:**

**Formulation:**

**Recommended controls:** Cultured cell line

**Bacterial resistance:**

**Selectable markers:**

**Additional notes:**

## Target details

**Target:** Cdk1

**Target alternate names:**

**Target background:** Cyclin dependent kinase 1 (Cdk1) regulates cell cycle progression. It is active as a heterodimeric complex with cyclins. Cdk1 associates with cyclin A at the end of S phase and targets proteins such as p53, BARD1, and BRCA2 involved in cell cycle progression, and others involved in DNA replication. At the end of the G2 phase, Cdk1 associates with cyclin B1 and B2 to phosphorylate multiple protein targets required for transition from G2 to M phase, and progression through M phase. Cdk1 itself undergoes phosphorylation at Thr14 and Tyr15 by PKMYT1, which prevents nuclear translocation of Cdk1. Cdk1 is also phosphorylated at Tyr15 by WEE1/2 which inhibits both Cdk1 activity and transition from G2 to M phase. Conversely, dephosphorylation of Thr14 and Tyr15 by CDC25A/B activates Cdk1 and triggers mitosis. Cdk1 may also regulate epigenetic gene silencing through phosphorylation of EZH2 and maintenance of histone H3 lysine 27 trimethylation, which has been implicated in cancer

**Molecular weight:**

**Ic50:**

## Applications

**Application:** ELISA ; WB

**Application notes:**

## Handling

**Format:** Liquid

**Concentration:** 1 mg/ml

**Passage number:**

**Growth medium:**

**Temperature:**

**Atmosphere:**

**Volume:**

**Storage medium:**

**Storage buffer:** PBS with 0.02% azide

**Storage conditions:** -15° C to -25° C

**Shipping conditions:** Shipping at 4° C

## Related tools

**Related tools:**

## References

**References:** Montembault et al. 2010. J Cell Biol. 191(7):1351-65. PMID: 21187330.

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