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# CDK4 Inhibitor P1446A-05

National Cancer Institute

## Source

National Cancer Institute. *CDK4 Inhibitor P1446A-05*. NCI Thesaurus. Code C80049.

A protein kinase inhibitor specific for the cyclin-dependent kinase 4 (CDK4) with potential antineoplastic activity. CDK4 inhibitor P1446A-05 specifically inhibits CDK4-mediated G1-S phase transition, arresting cell cycling and inhibiting cancer cell growth. The serine/threonine kinase CDK4 is found in a complex with D-type G1 cyclins and is the first kinase to become activated upon mitogenic stimulation, releasing cells from a quiescent stage into the G1/S growth cycling stage; CDK-cyclin complexes have been shown to phosphorylate the retinoblastoma (Rb) transcription factor in early G1, displacing histone deacetylase (HDAC) and blocking transcriptional repression.