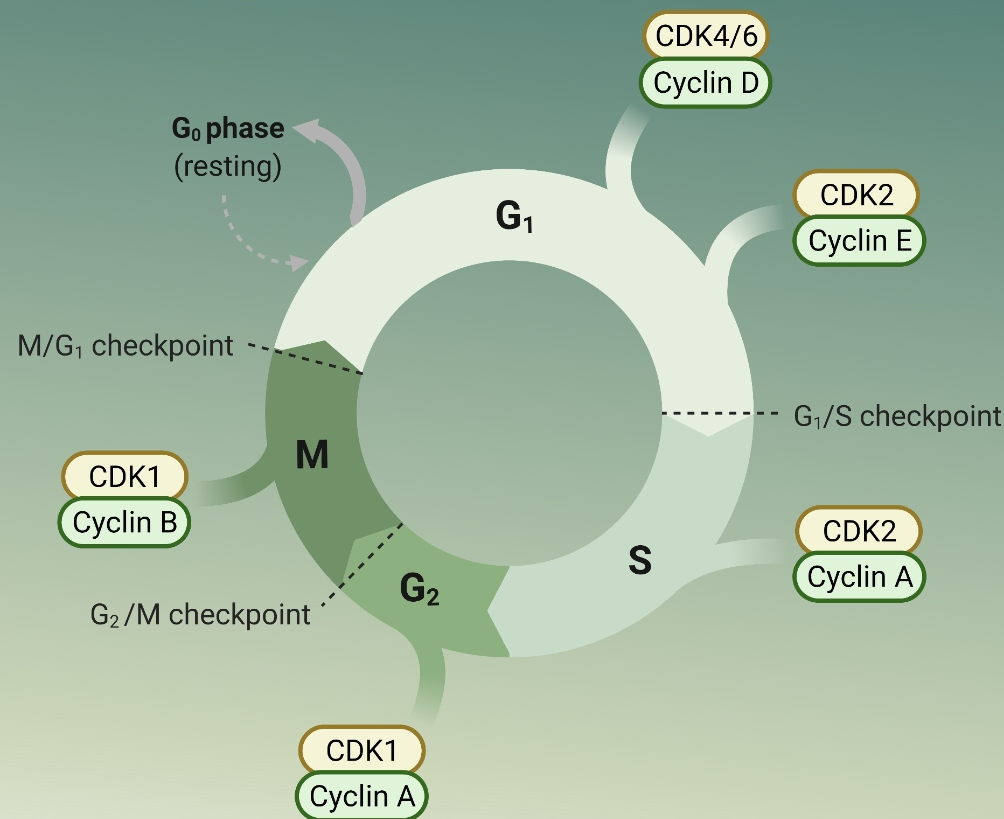


Cell Cycle Related Ligands

The cell cycle is a sequence of events that occur in a cell in the preparation for cell division. It is a two-step process: interphase and mitotic (M) phase. The interphase step is divided into three different phases: G₁ phase, S phase, and G₂ phase. Cell cycle checkpoints are integral components of DNA repair that coordinate the restoration of DNA structure. When some genes (such as the cell cycle inhibitors, RB, p53, etc) mutate, they may cause the cell uncontrollable proliferation, which leads to tumor formation. At the same time, the cells which are actively undergoing the cell cycle can be efficiently targeted by cancer therapy. Their DNA is exposed during the division and hence susceptible to damage by drugs. It makes molecular targets related to the cell cycle attractive for cancer medicinal chemistry research.

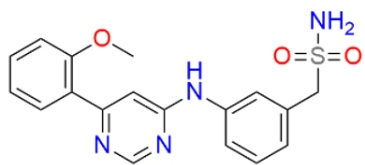
Cell Cycle Related Ligands Library contains 469 small ligands, some representative molecules are given below: LDC000067, Cdl9 inhibitor; HLM-008182, Plk3 inhibitor; CDK12-In-2, Cdk12 and Cdk13 inhibitor; Palbociclib, CDK2, CDK4, CDK6 and CDK7 inhibitor.

Related terms: *poly(ADP-ribose) polymerase, aurora kinase, MDM2 proto-oncogene, cyclin dependent kinase, tankyrase, checkpoint kinase, polo like kinase, CXCR4*

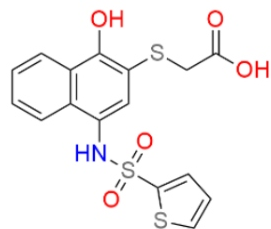


Cell cycle and related molecular targets (Created by BioRender.com)

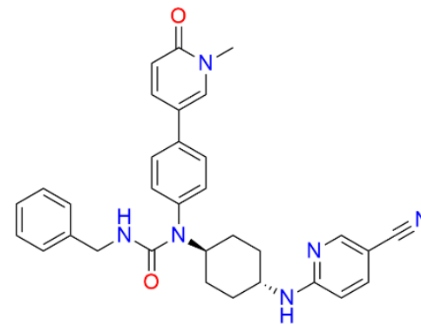
Highlights



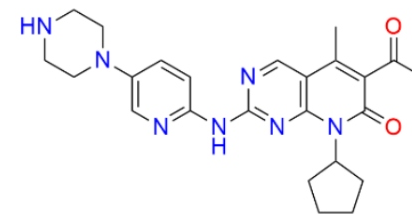
EBC-46039
CAS: 1073485-20-7
LDC000067, Cdl9 inhibitor,



EBC-07439
CAS: 518303-33-8
HLM-008182, Plk3 inhibitor,



EBC-13127
CAS: 2244987-03-7
CDK12-In-2, Cdk12 and Cdk13
inhibitor,



EBC-17116
CAS: 571190-30-2
Palbociclib, CDK2, CDK4,
CDK6 and CDK7 inhibitor,

Library Composition

Name	Occurrence in the library, times
poly(ADP-ribose) polymerase 1	34
aurora kinase A	12
MDM2 proto-oncogene	12
cyclin dependent kinase 2	11
tankyrase 2	11
cyclin dependent kinase 4	9
tankyrase	9
aurora kinase B	8
cyclin dependent kinase 1	8
cyclin dependent kinase 7	8
checkpoint kinase 2	7

polo like kinase 1	—	7
cyclin dependent kinase 6	—	7
cyclin dependent kinase 5	—	6
NIMA related kinase 2	—	6
polo like kinase 3	—	6
CXCR4	—	6
cyclin dependent kinase 8	—	5
cyclin dependent kinase 9	—	5
poly(ADP-ribose) polymerase 2	—	4
aurora kinase C	•	3
cyclin dependent kinase 3	•	3
NIMA related kinase 1	•	3
polo like kinase 2	•	3

ATM serine/threonine kinase	•	2
ATR serine/threonine kinase	•	2
polo like kinase 4	•	2
cyclin dependent kinase 16	•	2
histone H3 associated protein kinase	•	2
NIMA related kinase 3	•	2
TTK protein kinase	•	2
cyclin dependent kinase 12	•	2
cyclin dependent kinase 17	•	2
NIMA related kinase 4	•	1
NIMA related kinase 6	•	1
cell division cycle 7	•	1
NIMA related kinase 11	•	1

cyclin dependent kinase 13

•

1

poly (ADP-ribose) polymerase 3

•

1