

Store at
-20°C

Palbociclib

#47284

1 mg



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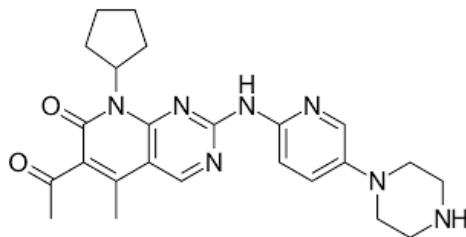
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Background: Palbociclib, also known as PD 0332991, is a potent and selective inhibitor of cyclin-dependent kinase 4 (Cdk4, IC_{50} = 11nM) and cyclin-dependent kinase 6 (Cdk6, IC_{50} = 16nM). Phosphorylation of retinoblastoma protein (Rb) by Cdk4 and Cdk6 leads to G_1 -S phase advancement, which is an important checkpoint for cell division (1). This regulation of the cell cycle makes the activation and inhibition of Cdk4 and Cdk6 highly researched. Palbociclib has been shown to arrest the proliferation of 5T33MM tumor cells *in vivo* and *ex vivo*, and treatment with the compound has increased the survival rate of 5T33MM diseased mice (2).

Background References:

- (1) Fry, D.W. et al. (2004) *Mol Cancer Ther* 3, 1427-38.
- (2) Menu, E. et al. (2008) *Cancer Res* 68, 5519-23.

Molecular Formula: $C_{24}H_{29}N_7O_2$

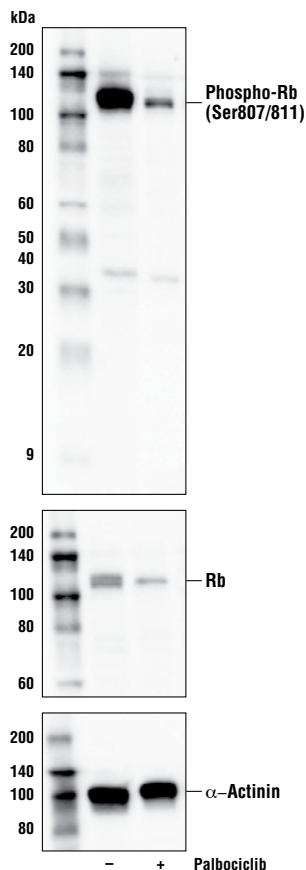


Molecular Weight: 447.5 g/mol

Solubility: Soluble in DMSO at 2 mg/ml.

Purity: >98%

CAS: 571190-30-2



Western blot analysis of extracts from MCF7 cells, untreated (-) or treated with Palbociclib (1 μ M, 24h; +), using Phospho-Rb (Ser807/811) (D20B12) XP® Rabbit mAb #8516 (upper), Rb (D20) Rabbit mAb #9313 (middle), or α -Actinin (D6F6) XP® Rabbit mAb #6487 (lower).

Storage: Store lyophilized at -20°C, desiccated. In lyophilized form, the chemical is stable for 24 months. Once in solution, store at -20°C and use within 1 month to prevent loss of potency. Aliquot to avoid multiple freeze/thaw cycles.

Directions For Use: Palbociclib is supplied as a lyophilized powder. For a 2 mM stock, reconstitute 1 mg of powder in 1.1 ml of DMSO. Heating to 37°C and/or additional vortexing may be required. Working concentrations and length of treatment can vary depending on the desired effect.

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Applications: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide **Species Cross-Reactivity:** H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.