



Catalog Number:	MC11124	Product Type:	Small Molecule
Bio-Activity:	CDK4 / CDK6 inhibitor	CAS #:	571190-30-2
Research Categories:	Immunology, cell death, cancer, diabetes, ageing	Chemical Name:	6-Acetyl-8-cyclopentyl-5-methyl-2-[[5-piperazin-1-yl]pyridine-2-yl]amino]-8H-pyrido[2,3-d]pyrimidin-7-one
Solubility:	Soluble in DMSO (up to 2 mg/ml with warming)	Molecular Formula:	C ₂₄ H ₂₉ N ₇ O ₂
Purity:	> 98%	Molecular Weight:	447.53
Format:	Powder	Ship Temp:	Ambient
Storage:	-20°C		

Application Notes

Description/Data:

Potent and selective inhibitor of Cdk4, IC₅₀ = 11 nM and Cdk6, IC₅₀ = 16 nM [1]. Inhibits phosphorylation of Rb protein and cell cycle progression through G1 in primary 5T33MM cells and sensitized these cells to killing by a proteasome inhibitor (bortezomib) in mouse models [2]. Induces autophagy and senescence in AGS gastric cancer cells [3]. Clinically useful breast cancer agent [4]. Cell cycle inhibitors boost tumor immunogenicity [5].

References:

- 1) El-Rayes et al. (2004), Cyclooxygenase-2-dependent and -independent effects of celecoxib in pancreatic cancer cell lines; Mol. Cancer Ther., 3 1427
- 2) Menu et al. (2008), A novel therapeutic combination using PD 0332991 and bortezomib: study in 5T33MM myeloma model; Cancer Res., 68 5519
- 3) Valenzuela et al. (2017), Palbociclib-induced autophagy and senescence in gastric cancer cells; Exp. Cell Res., 360 390
- 4) Palanisamy et al. (2016), Palbociclib: A new hope in the treatment of breast cancer; J. Cancer Res. Ther., 12 1220
- 5) Minton et al. (2017) Tumour immunology: Cell cycle inhibitors boost tumour immunogenicity; Nat. Rev. Immunol., 17 529

FOR RESEARCH USE ONLY

NEUROMICS' REAGENTS ARE FOR IN VITRO AND CERTAIN NON-HUMAN IN VIVO EXPERIMENTAL USE ONLY AND NOT INTENDED FOR USE IN ANY HUMAN CLINICAL INVESTIGATION, DIAGNOSIS, PROGNOSIS, OR TREATMENT. THE ABOVE ANALYSES ARE MERELY TYPICAL GUIDES. THEY ARE NOT TO BE CONSTRUED AS BEING SPECIFICATIONS. ALL OF THE ABOVE INFORMATION IS, TO THE BEST OF OUR KNOWLEDGE, TRUE AND ACCURATE. HOWEVER, SINCE THE CONDITIONS OF USE ARE BEYOND OUR CONTROL, ALL RECOMMENDATIONS OR SUGGESTIONS ARE MADE WITHOUT GUARANTEE, EXPRESS OR IMPLIED, ON OUR PART. WE DISCLAIM ALL LIABILITY IN CONNECTION WITH THE USE OF THE INFORMATION CONTAINED HEREIN OR OTHERWISE, AND ALL SUCH RISKS ARE ASSUMED BY THE USER. WE FURTHER EXPRESSLY DISCLAIM ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.-V2/08/2012