



LKT Laboratories, Inc.

## PJ34 Hydrochloride

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### Product Information

Product ID P3600  
CAS No. 344458-15-7  
Chemical Name

Synonym

Formula  $C_{17}H_{17}N_3O_2 \cdot HCl$   
Formula Wt. 331.80

Melting Point

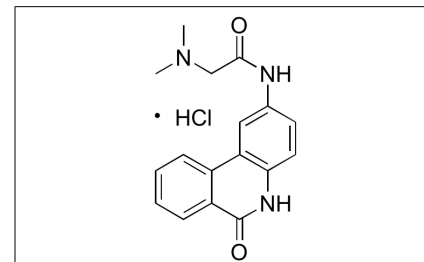
Purity  $\geq 95\%$

Solubility DMSO 66 mg/mL (198.91 mM)  
Water 66 mg/mL (198.91 mM)  
Ethanol Insoluble

Store Temp  $-20^{\circ}C$

Ship Temp Ambient

**Description** PJ34 is a phenanthridinone derivative that acts as a competitive poly(ADP)-ribose polymerase (PARP) inhibitor. PJ34 exhibits cardioprotective, neuroprotective, anticancer, and anti-diabetic activities. In in vitro and in vivo models of oxygen glucose deprivation, PJ34 protects against stroke-related ischemic brain injury. This compound is also cardioprotective against myocardial infarction, decreasing infarct size and postsystolic shortening. In diabetic NOD mice, PJ34 decreased insulinitis, beta-cell destruction, and diabetes incidence by decreasing islet IFN- $\gamma$  expression and inducing apoptosis in islet-infiltrating leukocytes. In mouse models of allergic encephalitis, PJ34 exhibits protective benefit by shifting the immune response from a pro-inflammatory Th1-mediated response to an anti-inflammatory Th2-mediated response. Additionally, in a variety of cancer cell lines, PJ34 induces G2/M phase mitotic arrest and caspase-dependent apoptosis, potentially due to direct antagonism of Pim-1 kinase.



**Bulk quantities available upon request**

Product ID	Size
P3600	1 mg
P3600	5 mg
P3600	25 mg

**References** Antolín AA, Jalencas X, Yélamos J, et al. Identification of pim kinases as novel targets for PJ34 with confounding effects in PARP biology. *ACS Chem Biol.* 2012 Dec 21;7(12):1962-7. PMID: 23025350.

Gangopadhyay NN, Luketich JD, Opest A, et al. Inhibition of poly(ADP-ribose) polymerase (PARP) induces apoptosis in lung cancer cell lines. *Cancer Invest.* 2011 Nov;29(9):608-16. PMID: 22011283.

Madison DL, Stauffer D, Lundblad JR. The PARP inhibitor PJ34 causes a PARP1-independent, p21 dependent mitotic arrest. *DNA Repair (Amst).* 2011 Oct 10;10(10):1003-13. PMID: 21840268.

Scott GS, Kean RB, Mikheeva T, et al. The therapeutic effects of PJ34 [N-(6-oxo-5,6-dihydrophenanthridin-2-yl)-N,N-dimethylacetamide.HCl], a selective inhibitor of poly(ADP-ribose) polymerase, in experimental allergic encephalomyelitis are associated with immunomodulation. *J Pharmacol Exp Ther.* 2004 Sep;310(3):1053-61. PMID: 15159442.

Suarez-Pinzon WL, Mabley JG, Power R, et al. Poly (ADP-ribose) polymerase inhibition prevents spontaneous and recurrent autoimmune diabetes in NOD mice by inducing apoptosis of islet-infiltrating leukocytes. *Diabetes.* 2003 Jul;52(7):1683-8. PMID: 12829633.

Faro R, Toyoda Y, McCully JD, et al. Myocardial protection by PJ34, a novel potent poly (ADP-ribose) synthetase inhibitor. *Ann Thorac Surg.* 2002 Feb;73(2):575-81. PMID: 11845877.

**Caution:** This product is intended for laboratory and research use only. It is not for human or drug use.