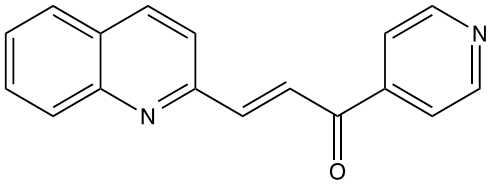
Catalog #10-4580

PFK15

CAS# 4382-63-2

1-(4-Pyridinyl)-3-(2-quinolinyl)-2-propen-1-one

Lot # FBA4126



PFK15 is an inhibitor of the metabolic enzyme 6-Phosphofructo-2-kinase/fructose-2,6-bisphosphatase 3 (PFKFB3). PFKFB3 is constitutively expressed by neoplastic cells and is required for the high glycolytic rate (Warburg Effect) of these cells. PFK15 inhibits PFKFB3 (IC_{50} = 207 nM) without inhibiting 96 other kinases.[1] PFK15 was able to potently inhibit glucose and F26BP uptake. It induced apoptosis and reduced tumor growth *in vitro* and *in vivo*. PFK15 has been shown to inhibit tumor growth in various cancer models.[2,3]

1) Clem *et al.* (2013), *Targeting 6-phosphofructo-2-kinase (PFKFB3) as a therapeutic strategy against cancer*; Mol.Cancer Ther. **12** 1461
2) Zhu *et al.* (2016), *PFK15,a Small Molecule Inhibitor of PFKFB3, Induces Cell Cycle Arrest, Apoptosis and Inhibits Invasion in Gastric Cancer*; PLoS One **11** e0163768
3) Li *et al.* (2017), *Blockage of glycolysis by targeting PFKFB3 suppresses tumor growth and metastasis in head and neck squamous cell carcinoma*; J.Exp.Clin.Cancer Res. **36** 7

PHYSICAL DATA

Molecular Weight:	260.29
Molecular Formula:	$C_{17}H_{12}N_2O$
Purity:	>99% (HPLC)
	NMR: (Conforms)
Solubility:	DMSO (15 mg/mL) and Ethanol (5 mg/mL)
Physical Description:	Tan solid
Storage and Stability:	Store as supplied at -20°C for up to 1 year from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 3 months.

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