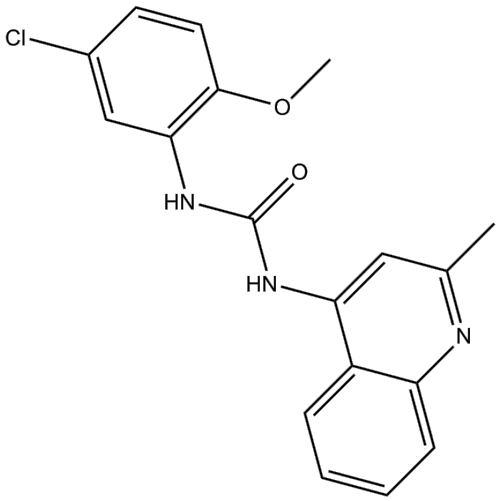
# Product Data Sheet

Product Name: PQ 401
Cat. No.: GC16991

## Chemical Properties

| | | | |
|---|---|---|---|
| Cas. No. | 196868-63-0 | | |
| Chemical Name | 1-(5-chloro-2-methoxyphenyl)-3-(2-methylquinolin-4-yl)urea | | |
| SMILES | CC1=NC2=CC=CC=C2C(=C1)NC(=O)NC3=C(C=CC(=C3)Cl)OC | | |
| Formula | $C_{18}H_{16}ClN_3O_2$ | M.Wt | 341.79 |
| Solubility | ≥ 17.1mg/mL in DMSO | Storage | Store at -20°C |
| General tips | For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months. | | |
| Shipping Condition | Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request. | | |

Structure




## Background

PQ401 is a novel, potent inhibitor of IGF-IR with IC50 of 12μM [1].

In human MCF-7 cells, PQ401 inhibited autophosphorylation of the IGF-IR with IC50 of 12 μM and autophosphorylation of the isolated kinase domain of the IGF-IR with IC50 < 1μM. In addition, PQ401

# Product Data Sheet

inhibited the growth of cultured breast cancer cells in serum at 10μM. PQ401 can decrease IGF-I-mediated signaling through the Akt antiapoptotic pathway. Twenty-four hours treatment of 15 μM PQ401 induced caspase-mediated apoptosis [1]. In small trigeminal ganglion neurons, PQ401 blocked the IGF-1-induced A-type K(+) currents (IA) that were associated with a hyperpolarizing shift in the voltage dependence of inactivation [2].

In vivo, a treatment with PQ401 triple per week reduced the growth rate of MCNeuA cells implanted into mice [1].

References:
[1]. Gable KL, Maddux BA, Penaranda C, Zavodovskaya M, Campbell MJ, Lobo M, Robinson L, Schow S, Kerner JA, Goldfine ID, Youngren JF. Diarylureas are small-molecule inhibitors of insulin-like growth factor I receptor signaling and breast cancer cell growth. Mol Cancer Ther. 2006 Apr;5(4):1079-86.
[2]. Wang H, Qin J, Gong S, Feng B, Zhang Y, Tao J. Insulin-like growth factor-1 receptor-mediated inhibition of A-type K(+) current induces sensory neuronal hyperexcitability through the phosphatidylinositol 3-kinase and extracellular signal-regulated kinase 1/2 pathways, independently of Akt. Endocrinology. 2014 Jan;155(1):168-79.