



PD-98059

Data Sheet

Catalog Number:	MC11078	Product Type:	Small Molecule
Bio-Activity:	MEK inhibitor	CAS #:	167869-21-8
Research Categories:	Stem cells, cancer	Chemical Name:	2-(2-Amino-3-methoxyphenyl)-4H-1-benzopyran-4-one
Solubility:	Soluble in DMSO (up to 6 mg/ml).	Molecular Formula:	C16H13NO3
Purity:	> 98%	Molecular Weight:	267.29
Format:	Powder	Ship Temp:	Ambient
Storage:	Room Temperature		

Application Notes

Description/Data:

Inhibitor of mitogen-activated protein kinase kinase (MKK / MEK). Acts via binding to the inactivated form of MEK, preventing its phosphorylation by cRAF or MEK kinase (IC₅₀=2-7 μ M) [1,2]. Accelerates differentiation of RAW264.7 cells into osteoclast-like cells [3]. Mimics BMP4 in supporting self renewal of embryonic stem cells [4].

References:

- 1) Alessi et al. (1995), PD 098059 is a specific inhibitor of the activation of mitogen-activated protein kinase kinase in vitro and in vivo; *J. Biol. Chem.*, 270 27489
- 2) Dudley et al. (1995), A synthetic inhibitor of the mitogen-activated protein kinase cascade; *Proc. Natl. Acad. Sci.*, 92 7686
- 3) Hotokezaka et al. (2002) U0126 and PD98059, specific inhibitors of MEK, accelerate differentiation of RAW264.7 cells into osteoclast-like cells; *J. Biol. Chem.*, 277 47366
- 4) Xiaoxia et al. (2004) BMP4 supports self-renewal of embryonic stem cells by inhibiting mitogen-activated protein kinase pathways; *Proc. Natl. Acad. Sci. USA* 101 6027

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Neuromics Antibodies • 5325 West 74th Street, Suite 8 • Edina, MN 55439
phone 866-350-1500 • fax 612-677-3976 • e-mail: pshuster@neuromics.com