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Produktinformation

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- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

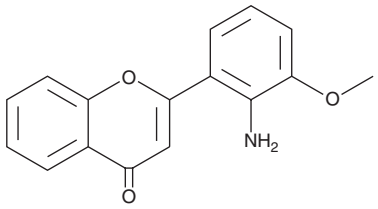
linkedin.com/company/szaboscandic

PRODUCT INFORMATION

PD 98059

Item No. 10006726

CAS Registry No.:	167869-21-8
Formal Name:	2-(2-amino-3-methoxyphenyl)-4H-1-benzopyran-4-one
Synonym:	NSC 679828
MF:	$C_{16}H_{13}NO_3$
FW:	267.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 239, 300, 375 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

PD 98059 is supplied as a crystalline solid. A stock solution may be made by dissolving the PD 98059 in the solvent of choice, which should be purged with an inert gas. PD 98059 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of PD 98059 in ethanol is approximately 0.5 mg/ml and approximately 20 mg/ml in DMSO and DMF.

PD 98059 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PD 98059 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. PD 98059 has a solubility of approximately 0.25 mg/ml in a 1:9 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

PD 98059 is a noncompetitive inhibitor of the MAPK pathway.[1,2] It prevents the activation of MEK by Raf or MEK kinase (a MAP3K) with an IC_{50} value of 2-7 µM but does not inhibit Raf-activated MAP2K1.[3] It inhibits Raf activation of MAP2K2 with an IC_{50} value of 50 µM.[3] PD 98059 also phosphorylates and activates AMP-activated protein kinase (AMPK) in a dose-dependent manner (EC_{50} = 35 µM in HEK293 cells).[4] It increases the ratios of ADP to ATP and AMP to ATP and increases phosphorylation of the AMPK target acetyl-CoA carboxylase (ACC).

References

1. Davies, S.P., Reddy, H., Caivano, M., *et al.* Specificity and mechanism of action of some commonly used protein kinase inhibitors. *Biochem. J.* **351(1)**, 95-105 (2000).
2. Dudley, D.T., Pang, L., Decker, S.J., *et al.* A synthetic inhibitor of the mitogen-activated protein kinase cascade. *Proc. Natl. Acad. Sci. U.S.A.* **92(17)**, 7686-7689 (1995).
3. Alessi, D.R., Cuenda, A., Cohen, P., *et al.* PD 098059 is a specific inhibitor of the activation of mitogen-activated protein kinase kinase *in vitro* and *in vivo*. *J. Biol. Chem.* **270(46)**, 27489-27494 (1995).
4. Dokladda, K., Green, K.A., Pan, D.A., *et al.* PD98059 and U0126 activate AMP-activated protein kinase by increasing the cellular AMP:ATP ratio and not via inhibition of the MAP kinase pathway. *FEBS Lett.* **579(1)**, 236-240 (2005).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM