

# Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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# Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

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## 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 in



# PRODUCT INFORMATION



Trametinib-13C-d<sub>2</sub> Item No. 29144

Formal Name: N-[3-[3-cyclopropyl-5-[(2-fluoro-4-

> iodophenyl)amino]-3,4,6,7-tetrahydro-6-methyl-8-(methyl-13C-d<sub>2</sub>)-2,4,7trioxopyrido[4,3-d]pyrimidin-1(2H)-yl]

phenyl]-acetamide

MF: C<sub>25</sub>[13C]H<sub>20</sub>D<sub>3</sub>FIN<sub>5</sub>O<sub>4</sub>

FW: 619.4

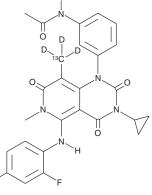
≥98% (Trametinib) **Chemical Purity:** 

Deuterium

Incorporation:  $\geq$ 99% deuterated forms (d<sub>1</sub>-d<sub>3</sub>);  $\leq$ 1% d<sub>0</sub>

Supplied as: A solid -20°C Storage: Stability: ≥2 years

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



#### **Laboratory Procedures**

Trametinib-13C-d<sub>3</sub> is intended for use as an internal standard for the quantification of trametinib (Item No. 16292) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Trametinib- $^{13}$ C-d<sub>3</sub> is supplied as a solid. A stock solution may be made by dissolving the trametinib- $^{13}$ C-d<sub>3</sub> in the solvent of choice, which should be purged with an inert gas. Trametinib-13C-d<sub>3</sub> is soluble in DMSO.

#### Description

Trametinib is an inhibitor of MEK1 and -2.1 It inhibits B-RAF- and C-RAF-induced phosphorylation of MEK1 ( $IC_{50}$ s = 3.4 and 1.8 nM, respectively) and MEK2 ( $IC_{50}$ s = 1.6 and 0.92 nM, respectively). Trametinib inhibits the growth of two human colorectal cancer cell lines expressing mutant B-RAF ( $IC_{50}$ s = 0.48 and 0.52 nM) and seven cell lines expressing mutant K-Ras ( $IC_{50}$ s = 2.2-174 nM) but does not inhibit the growth of wild-type COLO 320DM cells expressing both B-RAF and K-Ras (IC<sub>50</sub> = >10,000 nM). It reduces tumor growth in HT-29 and COLO 205 mouse xenograft models when used at doses of 0.3 and 1 mg/kg per day. Trametinib (0.03 and 0.1 mg/kg per day) also decreases M. tuberculosis-induced increases in hind paw volume in a rat model of arthritis.<sup>2</sup> Formulations containing trametinib, in combination with dabrafenib, have been used in the treatment of B-RAFV600E mutant metastatic melanoma.

### References

- 1. Yamaguchi, T., Kakefuda, R., Tajima, N., et al. Antitumor activities of JTP-74057 (GSK1120212), a novel MEK1/2 inhibitor, on colorectal cancer cell lines in vitro and in vivo. Int. J. Oncol. 39(1), 23-31 (2011).
- 2. Yamaguchi, T., Kakefuda, R., Tanimoto, A., et al. Suppressive effect of an orally active MEK1/2 inhibitor in two different animal models for rheumatoid arthritis: A comparison with leflunomide. Inflamm. Res. 61(5), 445-454 (2012).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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#### **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