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Produktinformation

- Forschungsprodukte & Biochemikalien
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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

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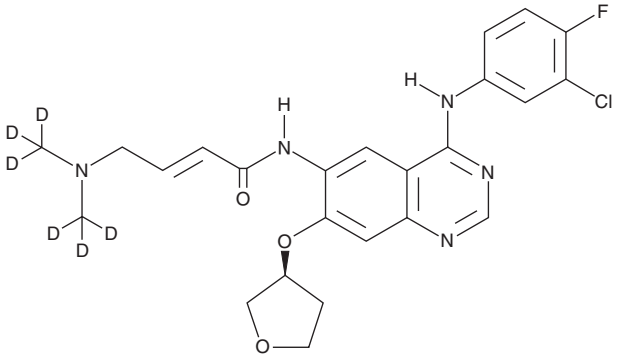
PRODUCT INFORMATION

Afatinib-d_6

Item No. 22552

CAS Registry No.:	1313874-96-2
Formal Name:	(2E)-N-[4-[(3-chloro-4-fluorophenyl)amino]-7-[[(3S)-tetrahydro-3-furanyl]oxy]-6-quinazolinyl]-4-[di(methyl-d_3)amino]-2-butenamide
MF:	$C_{24}H_{19}ClD_6FN_5O_3$
FW:	492.0
Chemical Purity:	≥98% (Afatinib)
Deuterium Incorporation:	≥99% deuterated forms (d_1-d_6); ≤1% d_0
UV/Vis.:	λ_{max}: 254, 343 nm
Supplied as:	A 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

Afatinib-d_6 is intended for use as an internal standard for the quantification of afatinib (Item Nos. 21567 | 11492) 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).

Afatinib-d_6 is supplied as a solid. A stock solution may be made by dissolving the afatinib-d_6 in the solvent of choice. Afatinib-d_6 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of afatinib-d_6 in these solvents is approximately 30 mg/ml.

Description

Afatinib is an irreversible inhibitor of epidermal growth factor receptor (EGFR) and ErbB2 (IC_{50}s = 0.5 and 14 nM, respectively).[1] It increases the cytotoxicity of adriamycin in a concentration-dependent manner in multidrug-resistant A549T lung cancer cells overexpressing P-glycoprotein.[2] Afatinib (20 mg/kg) reduces tumor growth in *ErbB2*-amplified NCI-N87 and NUGC4 gastric cancer mouse xenograft models.[3] Formulations containing afatinib have been used in the treatment of non-small cell lung cancer.

References

1. Eskens, F.A.L.M., Mom, C.H., Planting, A.S.T., *et al.* A phase I dose escalation study of BIBW 2992, an irreversible dual inhibitor of epidermal growth factor receptor 1 (EGFR) and 2 (HER2) tyrosine kinase in a 2-week on, 2-week off schedule in patients with advanced solid tumours. *Br. J. Cancer* **98(1)**, 80-85 (2008).
2. Zhang, Y., Wang, C.-Y., Duan, Y.-J., *et al.* Afatinib decreases P-glycoprotein expression to promote adriamycin toxicity of A549T cells. *J. Cell. Biochem.* **119(1)**, 414-423 (2018).
3. Yoshioka, T., Shien, K., Namba, K., *et al.* Antitumor activity of pan-HER inhibitors in HER2-positive gastric cancer. *Cancer Sci.* **109(4)**, 1166-1176 (2018).

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