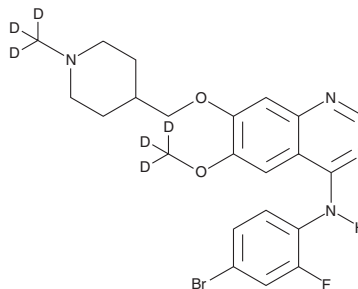


# PRODUCT INFORMATION



## Vandetanib-d<sub>6</sub> Item No. 28710

**CAS Registry No.:** 1174683-49-8  
**Formal Name:** N-(4-bromo-2-fluorophenyl)-6-(methoxy-d<sub>3</sub>)-7-[[1-(methyl-d<sub>3</sub>)-4-piperidinyl]methoxy]-4-quinazolinamine  
**MF:** C<sub>22</sub>H<sub>18</sub>BrD<sub>6</sub>FN<sub>4</sub>O<sub>2</sub>  
**FW:** 481.4  
**Chemical Purity:** ≥98% (Vandetanib)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>6</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

Vandetanib-d<sub>6</sub> is intended for use as an internal standard for the quantification of vandetanib (Item No. 14706) 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).

Vandetanib-d<sub>6</sub> is supplied as a solid. A stock solution may be made by dissolving the vandetanib-d<sub>6</sub> in the solvent of choice, which should be purged with an inert gas. Vandetanib-d<sub>6</sub> is soluble in organic solvents such as methanol, DMSO, and THF.

### Description

Vandetanib is a multi-kinase inhibitor that inhibits VEGFR2, VEGFR3, VEGFR1, EGFR, PDGFRβ, Tie-2, and FGFR1 in cell-free assays (IC<sub>50</sub>s = 40, 110, 1,600, 500, 1,100, 2,500, and 3,600 nM, respectively).<sup>1,2</sup> It also binds to 142 additional kinases in a panel of 442 kinases (K<sub>d</sub>s = 4.6-7,900 nM). Vandetanib (1 and 2.5 μM) induces apoptosis and cell cycle arrest at the G<sub>0</sub>/G<sub>1</sub> phase in GEO colon and OVCAR-3 ovarian cancer cells.<sup>3</sup> It inhibits proliferation of HAK1-B, KYN-2, and Huh7 hepatocarcinoma cells, as well as human umbilical vein endothelial cells (HUVECs), with IC<sub>50</sub> values of 10, 8.1, 9.4, and 7.1 μM, respectively.<sup>4</sup> Vandetanib (200 mg/kg) increases survival and decreases tumor angiogenesis and VEGFR2 levels in a D54MG glioblastoma mouse xenograft model.<sup>5</sup> It reduces tumor growth in a variety of mouse xenograft models, including lung, colon, and breast cancer models, when administered at doses of 25, 50, and 100 mg/kg per day.<sup>1</sup> Formulations containing vandetanib have been used in the treatment of medullary thyroid cancer.

### References

1. Wedge, S.R., Ogilvie, D.J., Dukes, M., *et al.* *Cancer Res.* **62**(16), 4645-4655 (2002).
2. Davis, M.I., Hunt, J.P., Herrgard, S., *et al.* *Nat. Biotechnol.* **29**(11), 1046-1051 (2011).
3. Ciardiello, F., Caputo, R., Damiano, V., *et al.* *Clin. Cancer Res.* **9**(4), 1546-1556 (2003).
4. Inoue, K., Torimura, T., Nakamura, T., *et al.* *Clin. Cancer Res.* **18**(14), 3924-3933 (2012).
5. Rich, J.N., Sathornsumetee, S., Keir, S.T., *et al.* *Clin. Cancer Res.* **11**(22), 8145-8157 (2005).

#### WARNING

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

#### SAFETY DATA

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.

#### WARRANTY AND LIMITATION OF REMEDY

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