

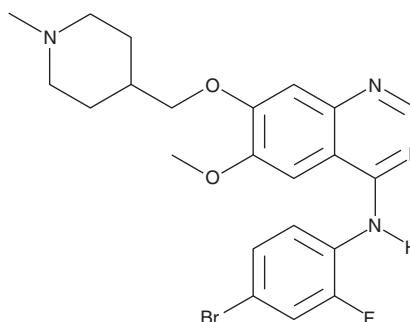
# PRODUCT INFORMATION



## Vandetanib

Item No. 14706

**CAS Registry No.:** 443913-73-3  
**Formal Name:** N-(4-bromo-2-fluorophenyl)-6-methoxy-7-[(1-methyl-4-piperidinyl)methoxy]-4-quinazolinamine  
**Synonyms:** CH 331, Zactima, ZD 6474  
**MF:** C<sub>22</sub>H<sub>24</sub>BrFN<sub>4</sub>O<sub>2</sub>  
**FW:** 475.4  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 217, 250, 331 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

Vandetanib is supplied as a crystalline solid. A stock solution may be made by dissolving the vandetanib in the solvent of choice, which should be purged with an inert gas. Vandetanib is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of vandetanib in these solvents is approximately 2 mg/ml.

Vandetanib is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, vandetanib should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Vandetanib has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Vandetanib is a broad spectrum, orally available kinase inhibitor that targets primarily tyrosine kinases, including vascular endothelial growth factor receptor (VEGFR) and epidermal growth factor receptor (EGFR), with IC<sub>50</sub> values in the nanomolar range.<sup>1,2</sup> It also potently blocks non-receptor tyrosine kinases, including ABL, RET, and SRC, as well as several serine/threonine kinases.<sup>3,4</sup> Primarily because of its effects on receptor tyrosine kinases like VEGFR and EGFR, vandetanib inhibits angiogenesis, cell growth, and metastasis and is effective against certain forms of cancer.<sup>4,5</sup>

### References

1. Hennequin, L.F., Stokes, E.S.E., Thomas, A.P., *et al. J. Med. Chem.* **45**, 1300-1312 (2002).
2. Kiselyov, A.S., Piatnitski, E., Milligan, D., *et al. Chem. Biol. Drug Des.* **69**, 331-337 (2007).
3. Davis, M.I., Hunt, J.P., Herrgard, S., *et al. Nat. Biotechnol.* **29(11)**, 1046-1051 (2011).
4. Morabito, A., Piccirillo, M.C., Falasconi, F., *et al. Oncologist* **14**, 378-390 (2009).
5. Ton, G.N., Banaszynski, M.E., and Kolesar, J.M. *Am. J. Health-Syst. Pharm.* **70**, 849-855 (2013).

#### 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.

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