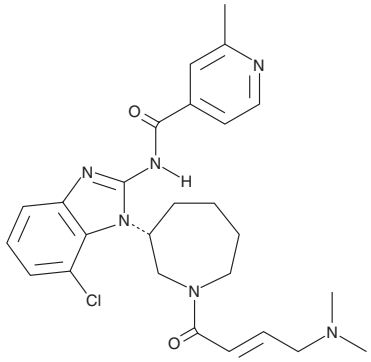
PRODUCT INFORMATION

Nazartinib

Item No. 22409

CAS Registry No.:	1508250-71-2
Formal Name:	N-[7-chloro-1-[(3R)-1-[(2E)-4-(dimethylamino)-1-oxo-2-buten-1-yl]hexahydro-1H-azepin-3-yl]-1H-benzimidazol-2-yl]-2-methyl-4-pyridinecarboxamide
MF:	$C_{26}H_{31}ClN_6O_2$
FW:	495.0
Purity:	≥98%
UV/Vis.:	λ_{max}: 216, 263, 327 nm
Supplied as:	A crystalline 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

Nazartinib is supplied as a crystalline solid. A stock solution may be made by dissolving the nazartinib in the solvent of choice, which should be purged with an inert gas. Nazartinib is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of nazartinib in these solvents is approximately 33 mg/ml.

Nazartinib is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, nazartinib should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Nazartinib has a solubility of approximately 0.2 mg/ml in a 1:4 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Nazartinib is an irreversible inhibitor of mutant EGF receptors (EGFRs).[1] It is selective for EGFR mutant cell lines, including H3255 and HCC827 lung adenocarcinoma cells (IC_{50}s = 6.11 and 1.52 nM, respectively) and resistant H1975 non-small cell lung cancer cells (NSCLC; IC_{50} = 4.18 nM), over cells expressing wild-type EGFRs (IC_{50} = 160.6 nM for HaCaT keratinocytes). Nazartinib decreases phosphorylation of EGFR in H3255, HCC827, and H1975 cells (EC_{50}s = 5, 1, and 3 nM, respectively) and inhibits cell proliferation (EC_{50}s = 9, 11, and 25 nM, respectively) but does not affect cell proliferation in cell lines containing wild-type EGFR.[2] It reduces tumor growth in an HCC827 lung adenocarcinoma mouse xenograft model when administered at doses ranging from 3 to 100 mg/kg per day for 21 days.

References

1. Lelais, G., Epple, R., Marsilje, T.H., *et al.* Discovery of (R,E)-N-(7-chloro-1-(1-[4-(dimethylamino)but-2-enoyl]azepan-3-yl)-1H-benzo[d]imidazol-2-yl)-2-methylisonicotinamide (EGF816), a novel, potent, and wt sparing covalent inhibitor of oncogenic (L858R, ex19del) and resistant (T790M) EGFR mutants for the treatment of EGFR mutant non-small-cell lung cancers. *J. Med. Chem.* **59(14)**, 6671-6689 (2016).
2. Jia, Y., Juarez, J., Li, J., *et al.* EGF816 Exerts anticancer effects in non-small cell lung cancer by irreversibly and selectively targeting primary and acquired activating mutations in the EGF receptor. *Cancer Res.* **76(6)**, 1591-1602 (2016).

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