

Product Name:	Neratinib Maleate
Product Number:	N068
CAS Number:	915942-22-2
Molecular Formula:	$C_{30}H_{29}ClN_6O_3 \cdot C_4H_4O_4$
Molecular Weight:	673.12
Form:	Powder
Appearance:	Off-white to yellow powder
Solubility:	DMSO with warming; very poorly soluble in ethanol; very poorly soluble in water
Source:	Synthetic
Storage Conditions:	-20C
Description:	Neratinib Maleate is the maleate salt form of Neratinib. Neratinib is a quinoline derivative. It acts as a tyrosine kinase inhibitor and has anticancer properties. Neratinib has shown benefit for HER2 positive breast cancer and non-small cell lung cancer.
Mechanism of Action:	Neratinib is a dual inhibitor of human epidermal growth factor receptor 2 (Her2) and epidermal growth factor receptor (EGFR) kinases with similar potency, and the inhibition is irreversible. It targets a cystine residue in the ATP binding pocket of the receptor. It can induce cell cycle arrest and decrease cell proliferation. The inhibition is irreversible.
References:	Breslin S and O'Driscoll L (2016) The relevance of using 3D cell cultures, in addition to 2D monolayer cultures, when evaluating breast cancer drug sensitivity and resistance. <i>Oncotarget</i> 7(29):45745-45756 PMID 27304190 Rabindran SK (2004) Antitumor activity of HKI-272, an orally active, irreversible inhibitor of the HER-2 tyrosine kinase. <i>Cancer Res.</i> 64(11):3958–3965 PMID 15173008 Zhao X et al (2019) Neratinib (HKI-272) reverses ABCB1-mediated chemotherapeutic drug resistance in vitro, in vivo and ex vivo. <i>Molec. Pharmacol.</i> 95(3) mol.111.076299