

Product Name:	Gefitinib
Product Number:	G039
CAS Number:	184475-35-2
Molecular Formula:	$C_{22}H_{24}ClFN_4O_3$
Molecular Weight:	446.902
Form:	Powder
Appearance:	White or off-white powder
Source:	Synthetic
Water Content (Karl Fischer):	≤0.2%
Melting Point:	198-203°C
Storage Conditions:	-20 °C
Description:	<p>Gefitinib is commonly used as an anti-lung and anti-breast cancer agent. Gefitinib acts as an inhibitor of mutated or overactive epidermal growth factor receptor (EGFR) by binding to the ATP binding site. Because epidermal growth factors are responsible for controlling cell growth and proliferation, a mutated form would likely facilitate cancer growth and development. Gefitinib is sparingly soluble in aqueous solution (0.027 mg/mL).</p> <p>This product is considered a dangerous good. Quantities above 1 g may be subject to additional shipping fees. Please contact us for specific questions.</p>
Mechanism of Action:	Gefitinib is a selective inhibitor of epidermal growth factor receptor's tyrosine kinase domain. Gefitinib inhibits EGFR tyrosine kinase by binding to the adenosine triphosphate (ATP)-binding site of the enzyme.
Cancer Applications	EGFR is overexpressed in the cells of certain types of human carcinomas. This leads to inappropriate activation of the anti-apoptotic Ras signalling cascade, eventually leading to uncontrolled cell proliferation.
References:	Birnbaum, A. "Gefitinib Therapy for Non-small Cell Lung Cancer." Current Treatment Options in Oncology 6.1 (2005): 75-81. www.ncbi.gov. Jan. 2005. Web. 4 Sept. 2012.