Product Description

Gefitinib is a selective inhibitor of epidermal growth factor receptor (EGFR) tyrosine kinase that binds competitively in the ATP binding pocket with IC\textsubscript{50} values of 23 and 80 nM for A431 vulval squamous carcinoma cells and KB cells, respectively (Barker et al.).

Molecular Name: Gefitinib
Alternative Names: Iressa\textsuperscript{TM}, ZD1839, Gefonib
CAS Number: 184475-35-2
Chemical Formula: C\textsubscript{22}H\textsubscript{24}ClF\textsubscript{4}N\textsubscript{4}O\textsubscript{3}
Molecular Weight: 446.9 g/mol
Purity: \(\geq\) 98%
Chemical Name: N-(3-chloro-4-fluorophenyl)-7-methoxy-6-(3-morpholin-4-ylpropoxy)quinazolin-4-amine

Structure:

![Chemical Structure](image)

Properties

Physical Appearance: A crystalline solid
Storage: Product stable at -20\textdegree C as supplied. Protect from prolonged exposure to light. For product expiry date, please contact techsupport@stemcell.com.
Solubility:

\begin{itemize}
  \item DMSO \leq 40 mM
  \item Absolute ethanol \leq 0.7 mM
\end{itemize}

For example, to prepare a 10 mM stock solution in DMSO, resuspend 500 mg in 112 mL of DMSO.

Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at -20\textdegree C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application.

Compound has low solubility in aqueous media. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.
Published Applications

CANCER RESEARCH
· Blocks proliferation in vitro and in mouse xenograft models, of multiple cancer cell types including colon, ovarian, and breast cancer cell lines (Ciardiello et al.).
· Induces apoptosis in the HaCaT human keratinocyte cell line via a c-Jun N-terminal kinase (JNK) activation, an EGFR-independent mechanism (Lu et al.).

References

Related Small Molecules
For a complete list of small molecules available from STEMCELL Technologies, please visit our website at www.stemcell.com/smallmolecules or contact us at techsupport@stemcell.com.

This product is hazardous. Please refer to the Safety Data Sheet (SDS).