Lapatinib
Item No. 11493

CAS Registry No.: 231277-92-2
Formal Name: N-[3-chloro-4-[(3-fluorophenyl)methoxy]phenyl]-6-[5-[[2-(methylsulfonyl)ethyl]amino]methyl]-2-furanyl]-4-quinazolinamine
Synonyms: GSK572016, GW 572016, Tyverb
MF: C_{23}H_{26}ClFN_{2}O_{5}S
FW: 581.1
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis: λ_{max} 245, 262, 306, 332, 362 nm

Laboratory Procedures
For long term storage, we suggest that lapatinib be stored as supplied at -20°C. It should be stable for at least two years.
Lapatinib is supplied as a crystalline solid. A stock solution may be made by dissolving the lapatinib in the solvent of choice. Lapatinib is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of lapatinib in these solvents is approximately 20 mg/ml.
Lapatinib is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, lapatinib should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Lapatinib has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description
The epidermal growth factor (EGF) receptors EGFR (ErbB1) and human EGFR2 (HER2, ErbB2) are receptor tyrosine kinases that are often over-expressed in cancer.1-2 Lapatinib is a potent and selective dual inhibitor of EGFR and HER2 (IC_{50} = 19 and 3 nM, respectively).3-5 It is effective in vivo and is used in combination therapy to prevent or suppress cancers where these kinases are over-expressed, including breast cancer.6-7

References

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent to your institution.

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