

Certificate of Analysis

Print Date: Jun 3rd 2019

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Product Name: Ceritinib Catalog No.: 6905 Batch No.: 1

CAS Number: 1032900-25-6

IUPAC Name: 5-Chloro- N^4 -[2-[(1-methylethyl)sulfonyl]phenyl]- N^2 -[5-methyl-2-(1-methylethoxy)-4-(4-piperidinyl)phenyl]

-2,4-pyrimidinediamine

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₈H₃₆CIN₅O₃S

Batch Molecular Weight: 558.14 **Physical Appearance:** White solid

Solubility: DMSO to 5 mM with gentle warming

ethanol to 5 mM with gentle warming

Storage: Store at +4°C

Batch Molecular Structure:

2. ANALYTICAL DATA

HPLC: Shows 99.6% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis: Carbon Hydrogen Nitrogen

Theoretical 60.25 6.5 12.55 Found 60.3 6.48 12.5

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Product Information

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Description:

Highly potent anaplastic lymphoma kinase (ALK) inhibitor (IC $_{50}$ = 0.2 nM). Also displays potent inhibition of insulin receptor (IR), insulin-like growth factor receptor 1 (IGF1R), serine/threonine-protein kinase STK22D and FLT3 (IC $_{50}$ values are 7, 8, 23 and 60 nM, respectively). Inhibits tumor growth in Karpas299 and H2228 rat xenograft models.

Physical and Chemical Properties:

Batch Molecular Formula: C₂₈H₃₆ClN₅O₃S

Batch Molecular Weight: 558.14 Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:

Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 5 mM with gentle warming ethanol to 5 mM with gentle warming

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Marsilje *et al* (2013) Synthesis, structure-activity relationships, and *in vivo* efficacy of the novel potent and selective anaplastic lymphoma kinase (ALK) inhibitor 5-chloro-*N*2-(2-isopropoxy-5-methyl-4-(piperidin-4-yl)phenyl)-*N*4-(2-(isopropylsulfonyl)phenyl) pyrimidine-2,4-diamine (LDK378) currently in phase 1 and phase 2 clinical trials. J.Med.Chem. *56* 5675. PMID: 23742252.