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Print Date: Jan 14th 2016

Certificate of Analysis

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Product Name: **AZ 628** **Catalog No.: 4836** **Batch No.: 1**

CAS Number: 878739-06-1

IUPAC Name: 3-(1-Cyano-1-methylethyl)-*N*-[3-[(3,4-dihydro-3-methyl-4-oxo-6-quinazolinyl)amino]-4-methylphenyl]benzamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{27}H_{25}N_5O_2$

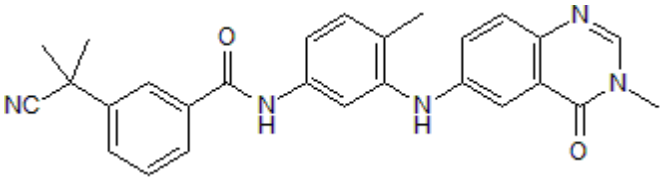
Batch Molecular Weight: 451.52

Physical Appearance: Off-white solid

Solubility: DMSO to 100 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.7% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	71.82	5.58	15.51
Found	71.64	5.59	15.14

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Description:

Potent, ATP-competitive inhibitor of Raf kinases (IC_{50} values are 29, 34 and 105 nM for c-Raf1, B-Raf^{V600E} and wild-type B-Raf, respectively). Displays selectivity for Raf kinases over a panel of 150 other kinases; inhibits activation of tyrosine protein kinases such as VEGFR2, Lyn, Flt1 and Fms. Also inhibits growth, and induces cell cycle arrest and apoptosis in colon and melanoma cell lines with the B-Raf^{V600E} mutation.

Physical and Chemical Properties:

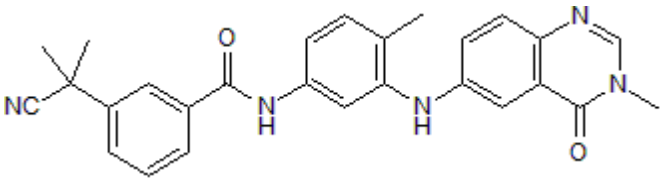
Batch Molecular Formula: $C_{27}H_{25}N_5O_2$

Batch Molecular Weight: 451.52

Physical Appearance: Off-white solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 100 mM

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:

Khazak *et al* (2007) Selective Raf inhibition in cancer therapy. Expert Opin.Ther.Targets ***11*** 1587. PMID: 18020980.

Montagut *et al* (2008) Elevated CRAF as a potential mechanism of acquired resistance to BRAF inhibition in melanoma. Cancer Res. ***68*** 4853. PMID: 18559533.

Hatzivassiliou *et al* (2010) RAF inhibitors prime wild-type RAF to activate the MAPK pathway and enhance growth. Nature ***464*** 431. PMID: 20130576.