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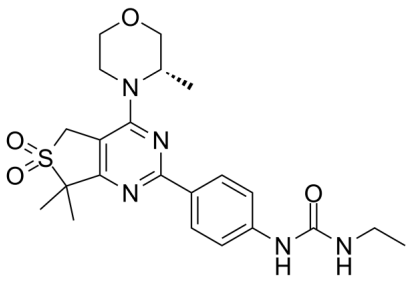
Certificate of Analysis

Catalog Number	BP22293
Product Name	CZ415

Physical and Chemical Properties

CAS No.	1429639-50-8
Chemical Formula	C22H29N5O4S
Molecular Weight	459.57
Solubility	DMSO: 84 mg/mL (182.8 mM) H2O: <1 mg/mL; Ethanol: <1 mg/mL
Storage	Powder: -20°C for 2 years In solvent: -80°C for 1 year
Chemical Structure OR Tested Image	

Product Information

Description	CZ415 is a potent and highly selective mTOR inhibitor.
Targets&IC50	mTOR:8.07(pIC50)

In vitro	CZ415 shows no genotoxic potential and has very good cell permeability. Treatment of CZ415 leads to inhibition of phosphorylation for downstream targets of mTORC1 and mTORC2(IC50=14.5 nM for pS6RP and IC50=14.8 nM for pAKT). The immunosuppressive effect of CZ415 is measured by detecting secreted IFNγ after 18 h in stimulated human whole blood, and the resulting IC50 was 226 nM. CZ415 shows no genotoxic potential. It is neither mutagenic in a bacterial mutation assay (Ames test) nor does it show genotoxicity in the mouse lymphoma assay (MLA), in either the presence or absence of rat-liver S9 mix.
In vivo	In vivo studies show that CZ415 has moderate clearance and good oral bioavailability. In an anti-CD3 mouse model CZ415 efficiently inhibits mTOR downstream signaling and, in a CIA mouse model, shows significant antiinflammatory effects. With its extraordinary selectivity, drug-like properties and proven efficacy in vivo, CZ415 represents an ideal molecule for the pharmacological investigation of mTOR pathophysiological role in vivo.

Analytical Data

HPLC	Shows Min >99% purity
H-NMR	Consistent with structure
Stability and Solubility Advice	Information on product stability, especially in solution, has rarely been reported and in most cases we can only provide a general guideline. We recommend that once the stock solution has been prepared, it be stored in equal quantities in sealed vials and used within 1 month. Avoid repeated freezing and thawing cycles. Storage conditions for some special products should be referred to their storage details.

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