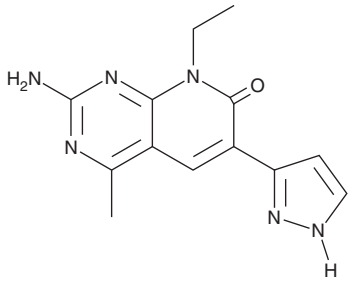
PRODUCT INFORMATION

Voxtalisib

Item No. 30323

CAS Registry No.: 934493-76-2
Formal Name: 2-amino-8-ethyl-4-methyl-6-(1H-pyrazol-3-yl)-pyrido[2,3-d]pyrimidin-7(8H)-one
Synonyms: SAR245409, XL765
MF: $C_{13}H_{14}N_6O$
FW: 270.3
Purity: ≥98%
UV/Vis.: λ_{max}: 220, 362 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Voxtalisib is supplied as a crystalline solid. A stock solution may be made by dissolving the voxtalisib in the solvent of choice, which should be purged with an inert gas. Voxtalisib is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of voxtalisib in these solvents is approximately 10 and 1 mg/ml, respectively.

Voxtalisib is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, voxtalisib should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Voxtalisib has a solubility of approximately 0.16 mg/ml in a 1:5 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Voxtalisib is a dual inhibitor of PI3K and mammalian target of rapamycin complex (mTORC; IC_{50}s = 39, 110, 43, 9, 160, and 910 nM for PI3Kα, PI3Kβ, PI3Kδ, PI3Kγ, mTORC1, and mTORC2, respectively).[1] It is selective for these kinases over vacuolar protein sorting 34 (VPS34; IC_{50} = 9,100 nM) and a panel of 130 additional protein kinases at 1.5 µM but does inhibit DNA protein kinase (DNA-PK; IC_{50} = 150 nM). Voxtalisib decreases EGF-induced production of PIP_3, a product of PI3K-mediated PIP_2 metabolism, in PC3 prostate cancer cells with an IC_{50} value of 290 nM. It also reduces phosphorylation of the PI3K and mTORC targets Akt and ribosomal protein S6 (S6RP) in the same model (IC_{50}s = 250 and 120 nM, respectively). Voxtalisib inhibits proliferation and colony formation of PC3 cells (IC_{50}s = 1,800 and 270 nM, respectively). It reduces tumor growth and increases survival in a GBM-39 glioblastoma multiforme (GBM) mouse xenograft model when administered at a dose of 30 mg/kg twice per day alone or in combination with temozolomide (Item No. 14163).[2]

References

1. Yu, P., Laird, A.D., Du, X., *et al.* Characterization of the activity of the PI3K/mTOR inhibitor XL765 (SAR245409) in tumor models with diverse genetic alterations affecting the PI3K pathway. *Mol. Cancer Ther.* **13(5)**, 1078-1091 (2014).
2. Prasad, G., Sottero, T., Yang, X., *et al.* Inhibition of PI3K/mTOR pathways in glioblastoma and implications for combination therapy with temozolomide. *Neuro. Oncol.* **13(4)**, 384-392 (2011).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM