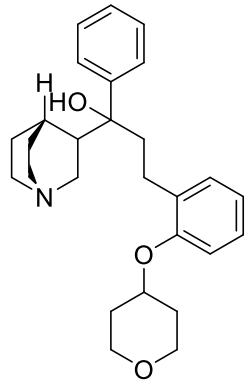
Product data sheet

MedKoo Cat#: 407806 Name: V-11-0711 CAS#: 1428339-47-2 Chemical Formula: $C_{27}H_{35}NO_3$ Exact Mass: 421.2617 Molecular Weight: 421.581	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:
V-11-0711 is a Chk-α inhibitor. V-11-0711 reduced the function of Chk-α by binding to the active site and inhibiting the catalytic activity but did not affect Chk-α protein levels. Chk-α protein and PtdCho, but not PC, may be essential in cancer cell proliferation.

2. CoA, QC data, SDS, and handling instruction
SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	TBD	TBD

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.37 mL	11.86 mL	23.72 mL
5 mM	0.47 mL	2.37 mL	4.74 mL
10 mM	0.24 mL	1.19 mL	2.37 mL
50 mM	0.05 mL	0.24 mL	0.47 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator
Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study
In vitro study

1. Koch K, Hartmann R, Schröter F, Suwala AK, Maciaczyk D, Krüger AC, Willbold D, Kahlert UD, Maciaczyk J. Reciprocal regulation of the cholinic phenotype and epithelial-mesenchymal transition in glioblastoma cells. Oncotarget. 2016 Nov 8;7(45):73414-73431. doi: 10.18632/oncotarget.12337. PMID: 27705917; PMCID: PMC5341988.
2. Falcon SC, Hudson CS, Huang Y, Mortimore M, Golec JM, Charlton PA, Weber P, Sundaram H. A non-catalytic role of choline kinase alpha is important in promoting cancer cell survival. Oncogenesis. 2013;2(3):e38. doi: 10.1038/oncsis.2013.2. PMID: 25522435; PMCID: PMC3641355.

In vivo study

TBD

7. Bioactivity
Biological target:

V-11-0711 is a Chk-α inhibitor.

Product data sheet

In vitro activity

In a translational approach, the CHKα-inhibitor V-11-0711 (Vertex Pharmaceuticals Incorporated) was applied on GBM cells and tested subsequent alterations in geno- and phenotype. V-11-0711 has been shown to specifically suppress CHKα catalytic activity in breast cancer and HeLa cells. GBM1 and JHH520 neurospheres were treated with DMSO, 0.1 μM V-11-0711 or 1 μM V-11-0711 for 48 h and metabolic extracts were analyzed by 1H NMR spectroscopy. As the PC signal at 3.22 ppm was highly reduced in the drug treated cells the ability of V-11-0711 to inhibit the enzymatic activity of CHKα in GBM cells was confirmed (Figure 7A). Additionally, V-11-0711 induced a dose dependent increase of CHKα protein in GBM1 but not in JHH520 cell line. Strikingly, treatment with 1 μM or 10 μM V-11-0711 for 48 h drastically reduced the cell viability of GBM1 and JHH520 cells (Figure8A) which we could associate with dose-dependent induction of apoptosis (Figure 8B). This confirms V-11-0711 as a potent CHKα and EMT inhibitor and suggests that the identified EMT-oncometabolic network may also be helpful to develop more tailored diagnostics monitoring the invasive properties of GBMs as well as surveilling the success of anti-EMT therapy.

Reference: Oncotarget. 2016 Nov 8; 7(45): 73414–73431. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5341988/

In vivo activity

TBD

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.