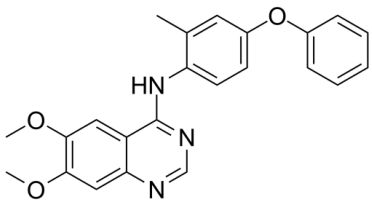
Data Sheet

Product Name:	APS-2-79
Cat. No.:	CS-5869
CAS No.:	2002381-25-9
Molecular Formula:	C23H21N3O3
Molecular Weight:	387.43
Target:	MEK
Pathway:	MAPK/ERK Pathway
Solubility:	DMSO : ≥ 33 mg/mL (85.18 mM)



BIOLOGICAL ACTIVITY:

APS-2-79 behaves as a kinase suppressor of Ras (**KSR**)-dependent antagonist of RAF-mediated **MEK** phosphorylation. APS-2-79 binds directly to **KSR2** within the KSR2-MEK1 complex with an **IC $_{50}$** of 120±23 nM for KSR2. IC50 & Target: IC50: 120±23 nM (KSR2)[1] **In Vitro:** APS-2-79 (1 μM) shifts the cell viability dose response to Trametinib in Ras-mutant cell lines HCT-116 and A549, but not BRAF mutant cell lines SK-MEL-239 and A375. Although the cellular effects of APS-2-79 alone are modest, combination analysis over full concentration matrices reveal that kinase suppressor of Ras (KSR)-inactive state (KSRi) synergizes with Trametinib, and other MEK inhibitors, specifically in KRAS mutant cell lines. APS-3-77, and additional control compounds, do not demonstrate Ras-mutant-specific synergy, supporting the hypothesis that the enhanced activity of Trametinib when combined with APS-2-79 depends on co-modulation of KSR[1].

PROTOCOL (Extracted from published papers and Only for reference)

Cell Assay: [1]Cell viability assays are performed in 96 well plates. Optimal cell densities for 96 well plate assays are determined to obtain linear growth over the time course of assays. **A549, HCT-116, A375, SK-MEL-239, COLO-205, LOVO, SK-MEL-2, CALU-6, MEWO, SW620 and SW1417 cells** are plated at 500 cells per well and treated with inhibitors (e.g., **APS-2-79; 100-3,000 nM**) for 72hrs before measuring viability. **H2087 and HEPG2 cells** are plated at 2000 cells per well, and treated with inhibitors (e.g., **APS-2-79; 100-3,000 nM**) for 72hrs. Cell viability is measured using Resazurin, and the percent cell viability is determined by normalizing inhibitor-treated samples to DMSO controls[1].

References:

[1]. Dhawan NS, et al. Small molecule stabilization of the KSR inactive state antagonizes oncogenic Ras signalling. Nature. 2016 Aug 24;537(7618):112-116.

CAIndexNames:

4-Quinazolinamine, 6,7-dimethoxy-N-(2-methyl-4-phenoxyphenyl)-

SMILES:

CC1=CC(OC2=CC=CC=C2)=CC=C1NC3=NC=NC4=CC(OC)=C(OC)C=C43

Caution: Product has not been fully validated for medical applications. For research use only.

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