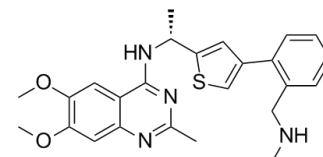


## BAY-293

<b>Cat. No.:</b>	HY-114398		
<b>CAS No.:</b>	2244904-70-7		
<b>Molecular Formula:</b>	C <sub>25</sub> H <sub>28</sub> N <sub>4</sub> O <sub>2</sub> S		
<b>Molecular Weight:</b>	448.58		
<b>Target:</b>	Ras		
<b>Pathway:</b>	GPCR/G Protein		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : ≥ 125 mg/mL (278.66 mM)  
 \* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
	1 mM	2.2293 mL	11.1463 mL	22.2926 mL
	5 mM	0.4459 mL	2.2293 mL	4.4585 mL
	10 mM	0.2229 mL	1.1146 mL	2.2293 mL

Please refer to the solubility information to select the appropriate solvent.

#### In Vivo

- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
 Solubility: ≥ 2.08 mg/mL (4.64 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
 Solubility: ≥ 2.08 mg/mL (4.64 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

BAY-293, a valuable chemical probe, blocks RAS activation via disruption of the KRAS-SOS1 interaction with an IC<sub>50</sub> of 21 nM. BAY-293 is a potent inhibitor of Son of Sevenless 1 (SOS1). SOS1 is the guanine nucleotide exchange factor (GEF) and activator of RAS<sup>[1]</sup>.

#### IC<sub>50</sub> & Target

KRAS-SOS1  
 21 nM (IC<sub>50</sub>)

#### In Vitro

BAY-293 inhibits the activation of RAS in HeLa cells, with IC<sub>50</sub> values in the submicromolar range<sup>[1]</sup>. BAY-293 (595 nM-3580 nM; 72 hours) shows efficient antiproliferative activity against wild-type KRAS cell lines (K-562, MOLM-

13) and cell lines with KRAS<sup>G12C</sup> mutation (NCI-H358, Calu-1)<sup>[1]</sup>.

BAY-293 efficiently inhibits pERK levels in K-562 cells after incubation for 60 min without affecting total protein levels of ERK [1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay<sup>[1]</sup>

Cell Line:	K-562, MOLM-13, H358 and Calu-1 cell lines
Concentration:	595-3580 nM
Incubation Time:	72 hours
Result:	IC <sub>50</sub> s of 1,090±170 nM, 995±400 nM, 3,480±100 nM and 3,190±50 nM for K-562, MOLM-13, H358 and Calu-1 cells, respectively.

## REFERENCES

[1]. Hillig RC, et al. Discovery of potent SOS1 inhibitors that block RAS activation via disruption of the RAS-SOS1 interaction. Proc Natl Acad Sci U S A. 2019 Feb 12;116(7):2551-2560.

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

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