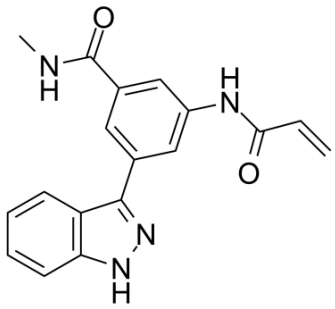
MKK7-COV-9

Cat. No.:	HY-122872
CAS No.:	2283355-59-7
Molecular Formula:	$C_{18}H_{16}N_4O_2$
Molecular Weight:	320.35
Target:	p38 MAPK
Pathway:	MAPK/ERK Pathway
Storage:	Please store the product under the recommended conditions in the COA.



BIOLOGICAL ACTIVITY

Description	MKK7-COV-9 is a potent and selective covalent inhibitor of **MKK7** and targets a specific protein–protein interaction of MKK7. MKK7-COV-9 blocks primary B cell activation in response to LPS with an **EC_{50}** of 4.98 μM[1].
IC_{50} & Target	p38 MAP kinase
In Vitro	Due to poor permeability, the piperidine analogs MKK7-COV-10 and MKK7-COV-11 proves to be inactive in ICW in 3T3 cells, as well as the carboxylic acid MKK7-COV-8. In contrast, as an amide counterpart , **MKK7-COV-9**, retains activity (EC_{50}=4.06 μM) and furthermore now provides a new vector for further derivatization[1]. MKK7-COV-9 (10 μM; 48 hours) shows limited cytotoxic effect only at the highest tested concentration. Only one cell line, HCT116, displayed half-maximal lethal dose (LD_{50})<10 μM for these two compounds[1]. MKK7-COV-9 (10 μM; 2 hr pre-incubation) is able to inhibit 60% of the $CD86^+$ response in response to LPS stimulation, in primary mouse B cells , except the negative control MKK7-NEG-1[1]. JNK is known to mediate activation of B cells in response to lipopolysaccharide (LPS; HY-D1056) through the TLR4 signaling pathway. MKK7-COV-9 (0-10 μM; 2 hr pre-incubation) is able to mediate activation of B cells in response to LPS through the TLR4 signaling pathway, it shows a dose-response curves for inhibition of LPS induced activation and exhibits an EC_{50} value of 4.98 μM.(EC_{50}=4.98 μM for MKK7-COV-12; EC_{50}>10 μM for MKK7-COV-7; EC_{50}=2.23 μM for JNK-IN-8)[1]. **Cell Viability Assay**[1]

Cell Line:	MDAMB231, HCT116, HT29,COLO205, HELA,Z93T, PC3,4T1,A549, PC9, MDAMB468
Concentration:	0-10 μM
Incubation Time:	48 hours
Result:	Showed little cytotoxic effect except for HCT116 cells.

REFERENCES

[1]. Amit Shraga, et al. Covalent Docking Identifies a Potent and Selective MKK7 Inhibitor. Cell Chem Biol. 2019 Jan 17;26(1):98-108.e5.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA