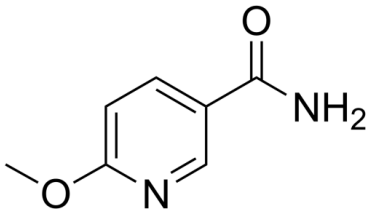
Data Sheet

Product Name:	JBSNF-000088
Cat. No.:	CS-W000376
CAS No.:	7150-23-4
Molecular Formula:	$C_7H_8N_2O_2$
Molecular Weight:	152.153
Target:	Others
Pathway:	Others
Solubility:	H_2O : 1 mg/mL (ultrasonic);DMSO : ≥ 100 mg/mL



BIOLOGICAL ACTIVITY:

JBSNF-000088 (6-Methoxynicotinamide), a analog of nicotinamide (NA), is a potent and orally active **Nicotinamide N-methyltransferase (NNMT)** inhibitor with **IC_{50}**s of 1.8 μM, 2.8 μM, and 5.0 μM for human NNMT, monkey NNMT and mouse NNMT, respectively. JBSNF-000088 inhibits NNMT activity, reduces MNA levels and drives insulin sensitization, glucose modulation and body weight reduction in animal models of metabolic disease[1]. IC50 & Target:IC50: 1.8 μM (human NNMT), 2.8 μM (monkey NNMT) and 5.0 μM (mouse NNMT)[1] ***In Vitro:***JBSNF-000088 (6-Methoxynicotinamide) has IC_{50} values are 1.6 and 6.3 μM for U2OS or differentiated 3T3L1 cells[1]. ***In Vivo:***JBSNF-000088 (6-Methoxynicotinamide) (50 mg/kg; oral route of administration for four weeks) shows statistically significant reduction in body weight (%) and leads to a statistically significant reduction in fed blood glucose on day 21[1].

JBSNF-000088 (50 mg/kg; oral gavage administration; twice daily for four weeks) leads to a statistically significant improvement in oral glucose tolerance on day 28 with glucose tolerance being normalized[1].

JBSNF-000088 (1 mg/kg; intravenous administration; for 4 hours) results in low plasma clearance of 21 mL/min▪kg and the volume of distribution at steady state of 0.7 L/kg, a very short plasma half-life of 0.5 hours upon intravenous administration[1].

JBSNF-000088 (10 mg/kg; oral gavage; for 4 hours) results in a Cmax of 3568 ng/mL with a T_{max} value of 0.5 hours, indicating rapid absorption in the intestine, and half-life of 0.4 hours by oral gavage. The oral bioavailability is found to be approximately 40%[1].

References:

[1]. Kannt A, et al. A small molecule inhibitor of Nicotinamide N-methyltransferase for the treatment of metabolic disorders. Sci Rep. 2018 Feb 26;8(1):3660.

CAIndexNames:

3-Pyridinecarboxamide, 6-methoxy-

SMILES:

O=C(N)C1=CC=C(OC)N=C1

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

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