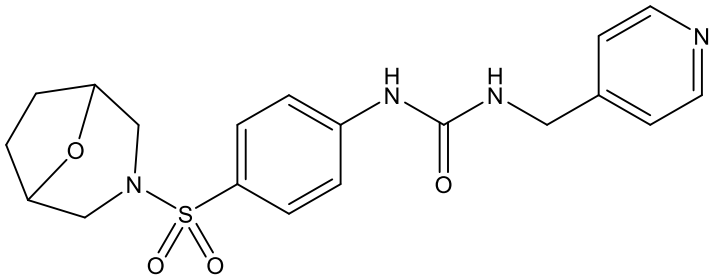
Catalog # 10-5778
SBI-797812
CAS# 2237268-08-3
N-[4-(8-Oxa-3-azabicyclo[3.2.1]oct-3-ylsulfonyl)phenyl]-N′-(4-pyridinylmethyl)-urea
Lot # E109291



NAMPT is the rate-limiting enzyme in the nicotinamide adenine dinucleotide (NAD^+) salvage pathway that converts nicotinamide to nicotinamide mononucleotide (NMN) which is responsible for most of the NAD^+ formation in mammals.[1] Cellular levels of NAD^+ have been shown to decrease with age and NAMPT is believed to be a key enzyme in the aging/senescence process.[2] SBI-797812 is a NAMPT activator, turning it into a "super catalyst" that more efficiently generates NMN.[3] It increases NMN levels and prevents NAD^+ feedback inhibition in a cell-free assay using recombinant human NAMPT at a concentration of 2 µM. In mice (20 mg/kg), it increases liver levels of NAD^+ and shows a trend toward increased levels in cardiac tissue but does not affect levels in the quadriceps, or gastrocnemius.[3]

1) Revollo *et al*. (2007), *The regulation of nicotinamide adenine dinucleotide biosynthesis by Nampt/PBEF/visfatin in mammals*; Curr. Opin. Gastroenterol., **23** 164
2) Khaidizar *et al*. (2021), *Nicotinamide Phosphoribosyltransferase as a Key Molecule of the Aging/Senescence Process*; Int. J. Mol. Sci., **22** 3709
3) Gardell *et al*. (2019), *Boosting NAD^+ with a small molecule that activates NAMPT*; Nat. Commun., **10** 3241

PHYSICAL DATA

Molecular Weight:	402.47
Molecular Formula:	$C_{19}H_{22}N_4O_4S$
Purity:	>98% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (30 mg/ml)
Physical Description:	White solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

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