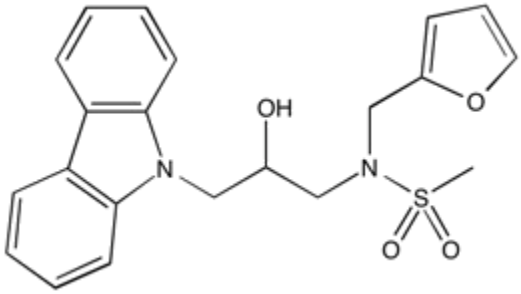
Catalog # 10-1411

KL-001

309928-48-1

N-[3-(9H-Carbazol-9-yl)-2-hydroxypropyl]-N-(2-furanylmethyl)methanesulfonamide

Lot # X104221



A novel tool that specifically interacts with cryptochrome (CRY) preventing its ubiquitin-dependent degradation resulting in lengthening of the circadian period. KL-001-mediated CRY stabilization inhibits glucagon-induced gluconeogenesis in primary hepatocytes[1]. Binds to the FAD-binding pocket of CRY2 as determined by co-crystal structure[2]. Induces an increase in period along with simultaneous reduction in amplitude of circadian reporter expression[3] in mammalian cells.

1) Hirota *et al*. (2012), *Identification of small molecule activators of cryptochrome*; Science, **337** 1094

2) Nangle *et al*. (2013), *Crystal structure of mammalian cryptochrome in complex with a small molecule competitor of its ubiquitin ligase*; Cell Res., **23** 1417

3) St. John *et al*. (2014), *Spatiotemporal separation of PER and CRY posttranslational regulation in the mammalian circadian clock*; Proc. Natl. Acad. Sci. USA, **11** 2040

PHYSICAL DATA

Molecular Weight:	398.46
Molecular Formula:	$C_{21}H_{22}N_2O_4S$
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (up to 100 mg/ml), Ethanol (up to 20 mg/ml with warming)
Physical Description:	White solid
Storage and Stability:	Store as supplied desiccated at room temperature for up to 2 years from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 3 months.

Focus Biomolecules LLC 400 Davis Drive, Suite 600 Plymouth Meeting PA 19462

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