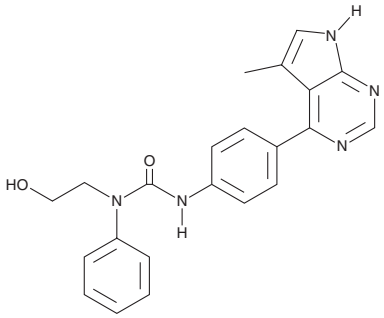
PRODUCT INFORMATION

SR 7826

Item No. 32976



CAS Registry No.:	1219728-20-7
Formal Name:	N-(2-hydroxyethyl)-N′-[4-(5-methyl-7H-pyrrolo[2,3-d]pyrimidin-4-yl) phenyl]-N-phenyl-urea
MF:	$C_{22}H_{21}N_5O_2$
FW:	387.4
Purity:	≥98%
Supplied as:	A solid
Storage:	-20°C
Stability:	≥4 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

SR 7826 is supplied as a solid. A stock solution may be made by dissolving the SR 7826 in the solvent of choice, which should be purged with an inert gas. SR 7826 is soluble (≥10 mg/ml) in DMSO.

Description

SR 7826 is an inhibitor of LIM kinase 1 (LIMK1; IC_{50} = 43 nM).[1] It is selective for LIMK1 over Rho-associated kinase 1 (ROCK1) and ROCK2 (IC_{50}s = 6,565 and 5,536 nM, respectively) and a panel of 60 kinases at 1 µM but does inhibit serine/threonine kinase 16 (STK16) by greater than 80% at 1 µM. SR 7826 inhibits the phosphorylation of cofilin induced by hepatocyte growth factor (HGF) in A7r5 cells (IC_{50} = 470 nM). It reduces the migration and invasion of PC3 prostate cancer cells when used at a concentration of 1 µM. SR 7826 (1 µM) inhibits electric field stimulation-, phenylephrine-, methoxamine-, norepinephrine-, or U-46619-induced contractions of prostate strips isolated from patients with prostate cancer.[2] *In vivo*, SR 7826 (10 mg/kg, p.o.) increases apical and basal thin spine density of CA1 pyramidal neurons in the hAPP-J20 mouse model of Alzheimer's disease.[3]

References

1. Yin, Y., Zheng, K., Eid, N., *et al.* Bis-aryl urea derivatives as potent and selective LIM kinase (Limk) inhibitors. *J. Med. Chem.* **58(4)**, 1846-1861 (2015).
2. Yu, Q., Gratzke, C., Wang, Y., *et al.* Inhibition of human prostate smooth muscle contraction by the LIM kinase inhibitors, SR7826 and LIMKi3. *Br. J. Pharmacol.* **175(11)**, 2077-2096 (2018).
3. Henderson, B.W., Greathouse, K., Ramdas, R., *et al.* Pharmacologic inhibition of LIMK1 provides dendritic spine resilience against β-amyloid. *Sci. Signal* **12(587)**, eaaw9318 (2019).

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