

Product Data Sheet

Product Name: NS 2028

Cat. No.: GC16975

Chemical Properties

Cas. No. 204326-43-2

Chemical Name 8-bromobenzo[b][1,2,4]oxadiazolo[4,3-d][1,4]oxazin-1(4H)-one

SMILES BrC1=CC(N2C(CO3)=NOC2=O)=C3C=C1

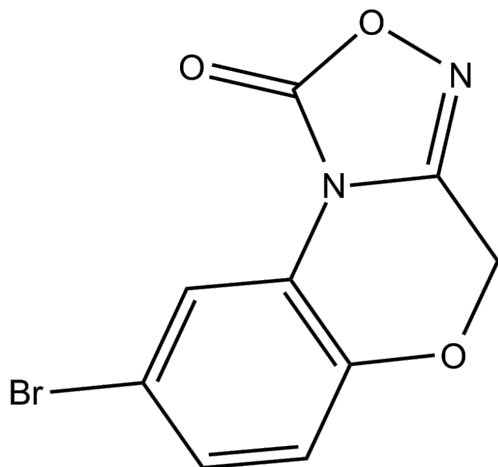
Formula C9H5BrN2O3 M.Wt 269.05

Solubility DMF: >80 mg/ml, DMF:PBS (10:90): 5 µg/ml, DMSO: >45 mg/ml, Ethanol: >2 mg/ml
Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

NS-2028 is a highly selective soluble Guanylyl Cyclase (sGC) inhibitor with IC₅₀ values of 30 nM and 200 nM for basal and NO-stimulated enzyme activity[1]. NS-2028 inhibits soluble Guanylyl Cyclase activity in homogenates of mouse cerebellum and neuronal NO synthase with IC₅₀ values of 17 nM

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

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and 20 nM[1]. NS-2028 inhibits 3-morpholino-sydnonimine (SIN-1)-elicited formation of cyclic GMP in human cultured umbilical vein endothelial cells with an IC₅₀ of 30 nM[1]. NS-2028 is commonly used in the research of nitric oxide signaling pathways, it inhibits NO-dependent relaxant responses in non-vascular smooth muscle completely (1 μ M)[1]. NS-2028 reduces vascular endothelial growth factor-induced angiogenesis and permeability[2].

NS-2028 (10 μ M; 24 hours) inhibits 25% cell number in comparison with those grown in the presence of vehicle[2]. NS-2028 (10 μ M; 30 mins) attenuates VEGF-induced EC migration by inhibiting p38 MAPK activation[2].

NS-2028 (Deliver orally; 1 g/L; 8 days) exhibits a significant reduction of new vessel formation in the avascular rabbit cornea in response to VEGF pellet implants[2].

References:

- [1]. Olesen SP, et al. Characterization of NS 2028 as a specific inhibitor of soluble guanylyl cyclase. Br J Pharmacol. 1998 Jan;123(2):299-309.
- [2]. Morbidelli L, et al. The soluble guanylyl cyclase inhibitor NS-2028 reduces vascular endothelial growth factor-induced angiogenesis and permeability. Am J Physiol Regul Integr Comp Physiol. 2010 Mar;298(3):R824-32.

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