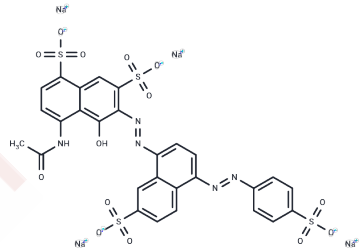
Data Sheet (Cat.No.T18928)

TargetMol

Brilliant Black BN

Chemical Properties



CAS No. : 2519-30-4

Formula: C28H17N5Na4O14S4

Molecular Weight: 867.68

Storage: Keep away from direct sunlight
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Brilliant Black BN (E 151) is an azo dye and a food colorant. It is a promising antiviral agent against EV71 infection via inhibiting the interaction between EV71 and its cellular uncoating factor cyclophilin A.
Targets(IC50)	Virus Protease
In vitro	Brilliant black BN inhibited the infection EV71 -GFP at a concentration of 300 μM. Brilliant black BN exhibits the inhibition of EV71 -GFP as a dose-dependent manner in infected RD cells (IC50: 10.1 μM). Brilliant black BN is able to inhibit all tested 28 EV71, CVA16, and CVA6 strains. In rhabdomyosarcoma cells, 50% inhibitory concentration 29 of the dye E151 for various strains of EV71 ranged from 2.39 μM to 28.12 μM, whereas its 50% cytotoxic concentration is 1870 μM [2].
In vivo	Brilliant black BN (i.p.; 200 mg/kg; 14 days)exhibits mild illness with clinical scores less than 3 and subsequently recovered when compared with PBS-group. All E151 270 treated mice are completely protected throughout the experiment [2].
Cell Research	Resting cell dye decolorization experiment 1. Deep-sea isolates were transferred to fresh 250 mL-GYE broth, centrifuged and added to 20 mM Tris-HCl (pH 7.6) for resting cell assays. 2. Cells were grown in 10 mL tubes (final cell dry weight up to 5.20–5.38 g/L), then Brilliant Black BN was added to a final concentration of 100 mg/L, the tubes were gently inverted several times, and incubated at 30°C, taking care not to shake; 3. Samples (200 μL) were collected regularly from 0 to 3 hours, immediately boiled in a dry heat bath for 5 minutes, and then centrifuged (13,000 g, 10 minutes); 4. The residual dye concentration of the supernatant was measured. The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.

Solubility Information

Solubility	DMSO: 123 mg/mL (141.76 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.1525 mL	5.7625 mL	11.525 mL
5 mM	0.2305 mL	1.1525 mL	2.305 mL
10 mM	0.1152 mL	0.5762 mL	1.1525 mL
50 mM	0.023 mL	0.1152 mL	0.2305 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Lang W, et al. Biodecolorization of a food azo dye by the deep sea Dermacoccus abyssi MT1.1(T) strain from the Mariana Trench. J Environ Manage. 2014 Jan;132:155-64.
Meng T, et al. In Vitro and In Vivo Inhibition of the Infectivity of Human Enterovirus 71 by a Sulfonated Food Azo Dye, Brilliant Black BN.J Virol. 2019 Aug 13;93(17).