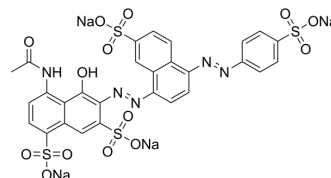


Brilliant Black BN

Cat. No.:	HY-128382
CAS No.:	2519-30-4
Molecular Formula:	C ₂₈ H ₁₇ N ₅ Na ₄ O ₁₄ S ₄
Molecular Weight:	867.68
Target:	Enterovirus
Pathway:	Anti-infection
Storage:	4°C, sealed storage, away from moisture and light * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 125 mg/mL (144.06 mM; Need ultrasonic)

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	1.1525 mL	5.7625 mL	11.5250 mL
5 mM	0.2305 mL	1.1525 mL	2.3050 mL
10 mM	0.1152 mL	0.5762 mL	1.1525 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Brilliant black BN (E151) is an azo dye and a food colorant^[1]. Brilliant black BN is a promising antiviral agent against EV71 infection via inhibiting the interaction between EV71 and its cellular uncoating factor cyclophilin A. Brilliant black BN has the potential for the investigation of contagious disease^[2].

IC₅₀ & Target

IC₅₀: 2.39 μM- 28.12 μM (various strains of EV71)^[2]

In Vitro

Brilliant black BN (E151) inhibits the interaction between EV71 and its cellular uncoating factor cyclophilin A^[1]. Brilliant black BN (E151) inhibited the infection EV71 -GFP at a concentration of 300 μM as evidenced from the reduced GFP signals. Brilliant black BN (E151) exhibits the inhibition of EV71 -GFP as a dose-dependent manner in infected RD cells, exhibits an IC₅₀ value of 10.1 μM^[1]. Brilliant black BN (E151) 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^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Brilliant black BN (E151)(intraperitoneal injection; 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^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	14-days old AG129 mice with EV71 ^[1]
Dosage:	200 mg/kg
Administration:	Intraperitoneal injection
Result:	Had a Protective effect on EV71 challenged AG129 mice by dye E151.

REFERENCES

- [1]. Lang W, et al. Biodecolorization of a food azo dye by the deep sea *Deinococcus abyssi* MT1.1(T) strain from the Mariana Trench. *J Environ Manage.* 2014 Jan;132:155-64.
- [2]. 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).

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

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