Data Sheet (Cat.No.T22096)

TargetMol

L 012 sodium salt

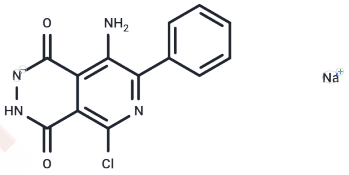
Chemical Properties

CAS No. : 143556-24-5

Formula: C13H8ClN4NaO2

Molecular Weight: 310.67

Storage: Store at low temperature
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	L 012 sodium salt, a luminol analogue, is a widely used chemiluminescent (CL) probe for active oxygen and active nitrogen. L 012 sodium salt is widely used to detect the superoxides (O2•–) derived from NADPH oxidase (Nox) to find Nox inhibitors.
Targets(IC50)	Others,Reactive Oxygen Species,ROS
In vitro	L 012 sodium salt is a new chemiluminescent probe. In activated EoL-1 cells which generated reactive oxygen species (ROS), treatment with L-012 generated a significant chemiluminescence. While, superoxide dismutase (100-300 U/ml) abolished the chemiluminescence, which suggested that the main ROS detected was O2- [1]. In cultured endothelial cells, phorbol 12-myristate 13-acetate (PMA, 1 μM) caused an 2.8-fold increase of L-012 chemiluminescence. Vanadate (100 μM) increased the chemiluminescence up to 17-fold. These results suggested that the increase of superoxide produced by NAD(P)H oxidase
In vivo	In the human oral cavity and blood and rat peritoneal cavity, L-012 reacted with ROS generated by activated neutrophils and generated strong chemiluminescence, which was higher than that of MCLA [2]. In nonobese diabetic mice and K8 knockout (K8(-/-)) mice, treatment with dextran sulfate sodium generated an increased L-012 chemiluminescence which detected reactive oxygen and nitrogen species (ROS and RNS) [3].

Solubility Information

Solubility	H2O: 3.16 mg/mL (10.17 mM),Sonication and heating to 60°C are recommended. DMSO: 45 mg/mL (144.85 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 1 mg/mL (3.22 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.2188 mL	16.0942 mL	32.1885 mL
5 mM	0.6438 mL	3.2188 mL	6.4377 mL
10 mM	0.3219 mL	1.6094 mL	3.2188 mL
50 mM	0.0644 mL	0.3219 mL	0.6438 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

Sohn HY, et al. Sensitive superoxide detection in vascular cells by the new chemiluminescence dye L-012. J Vasc Res. 1999;36(6):456-464.
Imada I, et al. Analysis of reactive oxygen species generated by neutrophils using a chemiluminescence probe L-01Anal Biochem. 1999;271(1):53-58.
Asghar MN, et al. In vivo imaging of reactive oxygen and nitrogen species in murine colitis. Inflamm Bowel Dis. 2014;20(8):1435-1447.

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