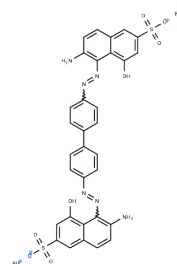


Direct Violet 1

Chemical Properties

CAS No. :	2586-60-9
Formula:	C ₃₂ H ₂₂ N ₆ Na ₂ O ₈ S ₂
Molecular Weight:	728.66
Storage:	Keep away from direct sunlight Powder: -20°C for 3 years In solvent: -80°C for 1 year <i>Actual storage temperature shall be subject to the COA.</i>



Biological Description

Description	Direct Violet 1 (CCRIS 2413) is an agent of dye.
Targets(IC50)	SARS-CoV
In vitro	<p>I. Solution preparation</p> <ol style="list-style-type: none"> 1. Solution preparation: Dissolve Direct Violet 1 in an appropriate amount of water, usually at a concentration of 0.5-2% (adjust according to the desired depth of dyeing). 2. Working solution preparation: Dissolve Direct Violet 1 in an appropriate amount of solvent (such as DMSO or water) to the desired concentration, usually 1-10 μM. <p>II. Textile dye application</p> <ol style="list-style-type: none"> 1. Immerse the fabric in the dye solution and use conventional textile dyeing procedures, usually heating to 60-90°C, and the dyeing time is adjustable (usually 30-60 minutes). 2. During the dyeing process, pH adjustment and temperature control can be used to optimize dye adsorption. <p>III. Washing and fixing:</p> <ol style="list-style-type: none"> 1) After dyeing, wash the fabric with water to remove excess dye. 2) A fixing agent can be used as needed to improve the durability and color stability of the dye. <p>III. PPI Inhibition of SARS-CoV-2 Spike Protein and ACE2 Receptor</p> <ol style="list-style-type: none"> 1. Mix SARS-CoV-2 spike protein and ACE2 receptor in vitro and set different concentrations of Direct Violet 1. 2. Measure the inhibitory effect of Direct Violet 1 on protein-protein interaction using surface plasmon resonance (SPR), fluorescence resonance energy transfer (FRET) or other interaction detection techniques. 3. IC50 determination: By comparing the effects of different concentrations of Direct Violet 1, calculate its IC50 value (1.47-2.63 μM) for inhibiting the interaction between SARS-CoV-2 spike protein and ACE2 receptor. 4. Application: <ol style="list-style-type: none"> 1) As a tool to study the interaction between SARS-CoV-2 spike protein and ACE2 receptor. 2) As a potential candidate molecule for anti-SARS-CoV-2 drugs.

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In vitro	The above information is based on published literature. Experimental procedures should be appropriately modified to meet specific research demands.
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Solubility Information

Solubility	DMSO: 55 mg/mL (75.48 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.3724 mL	6.8619 mL	13.7238 mL
5 mM	0.2745 mL	1.3724 mL	2.7448 mL
10 mM	0.1372 mL	0.6862 mL	1.3724 mL
50 mM	0.0274 mL	0.1372 mL	0.2745 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

Chen C, et al. Efficient removal of direct dyes by SA-Er biopolymer gel spheres: Equilibrium isotherms, kinetics and regeneration performance study. *Int J Biol Macromol*. 2024 Oct;277(Pt 4):134516.

Chuang ST, Buchwald P. Broad-Spectrum Small-Molecule Inhibitors of the SARS-CoV-2 Spike-ACE2 Protein-Protein Interaction from a Chemical Space of Privileged Protein Binders. *Pharmaceuticals (Basel)*. 2022 Aug 30;15(9):1084.

Bojadzic D, et al. Small-Molecule Inhibitors of the Coronavirus Spike: ACE2 Protein-Protein Interaction as Blockers of Viral Attachment and Entry for SARS-CoV-2. *ACS Infect Dis*. 2021 Jun 11;7(6):1519-1534.

Takeuchi A, Ogawa Y, Nishinoiri O, Kanno S, Shimizu H. Development of a method for monitoring personal exposure to benzyl violet 4B and direct blue 15 in workplace air. *J Occup Health*. 2018 Mar 27;60(2):192-195. doi: 10.1539/joh.17-0190-BR. Epub 2017 Dec 19. PubMed PMID: 29269605; PubMed Central PMCID: PMC5886887.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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