Product Data Sheet

Product Name: Transcrocetinate disodium (Disodium trans-crocetinate)
Cat. No.: GC32447

Chemical Properties

Cas. No.	591230-99-8		
SMILES	O=C([O-])/C(C)=C/C=C/C(C)=C/C=C/C=C(C)/C=C/C=C(C)/C([O-])=O.[Na+].[Na+]		
Formula	$C_{20}H_{22}Na_2O_4$	M.Wt	372.37
Solubility	DMSO: < 1 mg/mL (insoluble or slightly soluble)	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ 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			

Protocol

Cell experiment:

Cytotoxicity of test compounds is determined by MTT assay using Caco-2 cells in 96 well plates at a density of 20.000 cells per well in 200 µl FBS-free medium, grown for 96 h and followed by 24 h contact time with the test compounds (100 µL of serum-free media containing SE 0.5, 1, and 2 mg/mL; trans-crocin-1 250, 500, and 1000 µM; Transcrocetinate 10, 40, 80, and 160 µM) and incubation at 37°C/5% CO2. The incubation solutions are aspirated, each well is washed twice with 150 µL of PBS and 50 µL of MTT solution are added (2.5 mg/mL in PBS). Supernatants are discarded and the formed formazan is dissolved in 50 µL of DMSO. The absorption of the resulting solution is determined at λ=492 nm against reference wavelength λ=690 nm[1].

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References:

[1]. Lautenschläger M, et al. Intestinal formation of trans-Crocetin from saffron extract (Crocus sativus L.) and in vitro permeation through intestinal and blood brain barrier. Phytomedicine. 2015 Jan 15;22(1):36-44.

Background

Transcrocetinate disodium, extracted from saffron (Crocus sativus L.), acts as an NMDA receptor antagonist with high affinity.

Transcrocetinate (Transcrocetin, trans-Crocetin), a saffron metabolite originating from the crocin apocarotenoids, has been shown to exert strong NMDA receptor affinity and is thought to be responsible for the CNS activity of saffron.To ensure unchanged viability of Caco-2 cells throughout the transport experiments, cellular mitochondrial dehydrogenase activity of Caco-2 cells is measured by MTT assay after a 24 h incubation period with the test compounds: Hydroalcoholic saffron extract saffron extract (SE, 0.5-1 mg/mL) and crocin-1 (250-1000 μM) reveal no negative significant changes in cellular viability. Transcrocetinate at 10 μM level does not change viability while higher concentrations (40-160 μM) reduces significantly cellular viability[1].

[1]. Lautenschl?ger M, et al. Intestinal formation of trans-Crocetin from saffron extract (Crocus sativus L.) and in vitro permeation through intestinal and blood brain barrier.

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