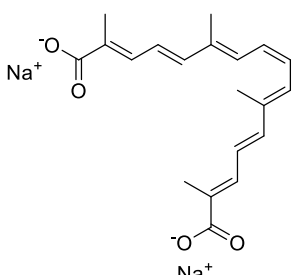


Product data sheet



MedKoo Cat#: 328085 Name: Trans-crocetin sodium CAS#: 591230-99-8 (sodium 1:2) Chemical Formula: C ₂₀ H ₂₂ Na ₂ O ₄ Exact Mass: 328.1675 Molecular Weight: 372.3715		
Product supplied as:	Powder	
Purity (by HPLC):	≥ 98%	
Shipping conditions	Ambient temperature	
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.	

1. Product description:

Trans-crocetin sodium, also known as Transcrocetinate sodium or Sodium crocetin, is potentially for the treatment of glioblastoma. Trans-crocetin improves amyloid-β degradation in monocytes from Alzheimer's Disease patients. trans-crocetin inhibit glutamatergic synaptic transmission in rat cortical brain slices. Crocetin inhibits invasiveness of MDA-MB-231 breast cancer cells via downregulation of matrix metalloproteinases.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
H ₂ O	16.67	44.77

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.69 mL	13.43 mL	26.85 mL
5 mM	0.54 mL	2.69 mL	5.37 mL
10 mM	0.27 mL	1.34 mL	2.69 mL
50 mM	0.05 mL	0.27 mL	0.54 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

1. Lautenschläger M, Sendker J, Hüwel S, Galla HJ, Brandt S, Düfer M, Riehemann K, Hensel A. 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. doi: 10.1016/j.phymed.2014.10.009. Epub 2014 Nov 11. PMID: 25636868.
2. Chalatsa I, Arvanitis DA, Koulakiotis NS, Giagini A, Skaltsounis AL, Papadopoulou-Daifoti Z, Tsarbopoulos A, Sanoudou D. The *Crocus sativus* Compounds trans-Crocetin 4 and trans-Crocetin Modulate the Amyloidogenic Pathway and Tau Misprocessing in Alzheimer Disease Neuronal Cell Culture Models. *Front Neurosci*. 2019 Mar 26;13:249. doi: 10.3389/fnins.2019.00249. PMID: 30971876; PMCID: PMC6443833.

In vivo study

TBD

7. Bioactivity

Biological target:

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

Product data sheet



In vitro activity

Trans-crocetin was selected for in depth molecular characterization of its potentially protective effects against Alzheimer's Disease (AD), utilizing two AD neuronal cell culture models (SH-SY5Y overexpressing APP and PC12 expressing hyperphosphorylated tau). Biologically relevant concentrations, ranging from 0.1 μ M to 1 mM, applied for 24 h or 72 h, were well tolerated by differentiated wild type SH-SY5Y and PC12 cells. Trans-crocetin dramatically reduced BACE1 (by 80%), total PSEN1 (by 17%), PSEN1 (by 65%) and PSEN2 (by 23%), as well as their complexes (by 69 and 50%, respectively), while it increased PSEN1- and PSEN2-CTF (by 83 and 57%, respectively). Meanwhile it significantly increased total APP by 46%, cellular APP by 41%, and APP-C99 by 107% (Figure 4). Additionally, trans-crocetin significantly reduced both total (by 46%) and phosphorylated tau (pThr231 by 19% and pSer199/Ser202 by 68%), as well as GSK3 β (by 53%), ERK2 (by 37%), pERK1 (by 35%) and pERK2 (by 32%).

Reference: Front Neurosci. 2019 Mar 26;13:249. <https://pubmed.ncbi.nlm.nih.gov/30971876/>

In vivo activity

TBD

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.