

Product data sheet



MedKoo Cat#: 413352 Name: Cromolyn sodium CAS#: 15826-37-6 (sodium) Chemical Formula: C ₂₃ H ₁₄ Na ₂ O ₁₁ Molecular Weight: 512.33	
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:

Cromolyn sodium is a chromone complex that acts by inhibiting the release of chemical mediators from sensitized mast cells. It is used in the prophylactic treatment of both allergic and exercise-induced asthma, but does not affect an established asthmatic attack.

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
DMSO	25.0	48.80
Water	25.87	50.49

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.95 mL	9.76 mL	19.52 mL
5 mM	0.39 mL	1.95 mL	3.90 mL
10 mM	0.20 mL	0.98 mL	1.95 mL
50 mM	0.04 mL	0.20 mL	0.39 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. Wang YJ, Monteagudo A, Downey MA, Ashton-Rickardt PG, Elmaleh DR. Cromolyn inhibits the secretion of inflammatory cytokines by human microglia (HMC3). *Sci Rep.* 2021 Apr 13;11(1):8054. doi: 10.1038/s41598-021-85702-8. PMID: 33850164; PMCID: PMC8044132.
2. Zhang C, Griciu A, Hudry E, Wan Y, Quinti L, Ward J, Forte AM, Shen X, Ran C, Elmaleh DR, Tanzi RE. Cromolyn Reduces Levels of the Alzheimer's Disease-Associated Amyloid β -Protein by Promoting Microglial Phagocytosis. *Sci Rep.* 2018 Jan 18;8(1):1144. doi: 10.1038/s41598-018-19641-2. PMID: 29348604; PMCID: PMC5773545.

In vivo study

1. Granucci EJ, Griciu A, Mueller KA, Mills AN, Le H, Dios AM, McGinty D, Pereira J, Elmaleh D, Berry JD, Paganoni S, Cudkowicz ME, Tanzi RE, Sadri-Vakili G. Cromolyn sodium delays disease onset and is neuroprotective in the SOD1G93A Mouse Model of amyotrophic lateral sclerosis. *Sci Rep.* 2019 Nov 27;9(1):17728. doi: 10.1038/s41598-019-53982-w. PMID: 31776380; PMCID: PMC6881366.
2. Jiang L, Fang P, Septer S, Apte U, Pritchard MT. Inhibition of Mast Cell Degranulation With Cromolyn Sodium Exhibits Organ-Specific Effects in Polycystic Kidney (PCK) Rats. *Int J Toxicol.* 2018 Jul/Aug;37(4):308-326. doi: 10.1177/1091581818777754. Epub 2018 Jun 3. PMID: 29862868; PMCID: PMC6027616.

7. Bioactivity

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Biological target:

Cromolyn sodium is a GSK-3 β inhibitor with an IC50 of 2.0 μ M.

In vitro activity

This study then tested the effect of both cromolyn and F-cromolyn at a low (0.3 μ M) and higher (3 μ M) concentration against TNF- α induced cytokine secretion by HMC3 microglia. IFN- γ ($p = 0.0033$; $p = 0.0013$), IL-6 ($p = 0.0065$; $p = 0.0012$), IL-1 β ($p < 0.001$; $p < 0.001$), and IL-8 ($p = 0.0006$; $p < 0.001$) concentrations were decreased after addition of the lower 0.3 μ M concentration of cromolyn and F-cromolyn, respectively, with only cromolyn dose-dependently reducing IL-6 ($p < 0.001$) and IL-1 β ($p < 0.001$) after 3 μ M addition.

Reference: Sci Rep. 2021; 11: 8054. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8044132/>

In vivo activity

There was a significant effect of treatment on peak body weight (Mantel-Cox test, $p < 0.0001$), with a median age of onset of 110 days for TgSOD1-Vehicle group and 130 days for the TgSOD1-Cromolyn group (Fig. 1b). These findings suggest that cromolyn treatment delayed disease onset in TgSOD1 mice. Male and female data are shown separately in Fig. S1a,b. Both female mice (Mantel-Cox test, $p = 0.0009$) (Fig. S1a) and male mice (Mantel-Cox test, $p = 0.0193$) (Fig. S1b) demonstrated a significant delay in the onset of motor symptoms following cromolyn treatment.

Reference: Sci Rep. 2019; 9: 17728. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6881366/>

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.