

# Product data sheet



MedKoo Cat#: 319531 Name: Gabexate mesylate CAS#: 56974-61-9 (mesylate) Chemical Formula: C <sub>17</sub> H <sub>27</sub> N <sub>3</sub> O <sub>7</sub> S Molecular Weight: 417.48	
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:

Gabexate is a serine protease inhibitor which is used therapeutically (as gabexate mesilate) in the treatment of pancreatitis, disseminated intravascular coagulation, and as a regional anticoagulant for haemodialysis.

## 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	69.33	166.07
DMF	25.0	59.88
Ethanol	83.0	198.81
Water	20.30	48.63

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.40 mL	11.98 mL	23.95 mL
5 mM	0.48 mL	2.40 mL	4.79 mL
10 mM	0.24 mL	1.20 mL	2.40 mL
50 mM	0.05 mL	0.24 mL	0.48 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

- Lee MF, Chang CW, Wang NM, Lin SJ, Chen YH. Serine protease inhibitor gabexate mesilate attenuates american cockroach-induced bronchial damage and inflammatory cytokine release. *J Investig Allergol Clin Immunol.* 2014;24(5):338-45. PMID: 25345304.
- Brandi G, Tavolari S, De Rosa F, Di Girolamo S, Agostini V, Barbera MA, Frega G, Biasco G. Antitumoral efficacy of the protease inhibitor gabexate mesilate in colon cancer cells harbouring KRAS, BRAF and PIK3CA mutations. *PLoS One.* 2012;7(7):e41347. doi: 10.1371/journal.pone.0041347. Epub 2012 Jul 24. PMID: 22911782; PMCID: PMC3404056.

### In vivo study

- Oh SH, Lee HY, Ki YJ, Kim SH, Lim KJ, Jung KT. Gabexate mesilate ameliorates the neuropathic pain in a rat model by inhibition of proinflammatory cytokines and nitric oxide pathway via suppression of nuclear factor-κB. *Korean J Pain.* 2020 Jan 1;33(1):30-39. doi: 10.3344/kjp.2020.33.1.30. PMID: 31888315; PMCID: PMC6944363.
- Xie LB, Zeng DY, Wang XD, Lin T, Li YP, Lu YP. Preconditioning with gabexate is superior to inosine for ameliorating acute renal ischemia-reperfusion injury in rats. *Transplant Proc.* 2014 Jan-Feb;46(1):40-5. doi: 10.1016/j.transproceed.2013.10.037. PMID: 24507023.

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## 7. Bioactivity

### Biological target:

Gabexate mesylate is a Factor X inhibitor; serine protease inhibitor.

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### In vitro activity

GM (gabexate mesylate) prevented CraA-induced bronchial epithelial cell detachment and morphological changes. It had superior and more extensive suppression effects than specific target MAPK inhibitors in CraA-induced mRNA expression of IL-8, monocyte chemotactic protein (MCP) 1, chemokine (C-C motif) ligand 20, and granulocyte-macrophage colony-stimulating factor from the cells in a dose-dependent manner.

Reference: J Investig Allergol Clin Immunol. 2014;24(5):338-45. <https://pubmed.ncbi.nlm.nih.gov/25345304/>

### In vivo activity

The rats of the gabexate group, which were administered 20 mg/kg of gabexate mesilate intraperitoneal daily after 3rd day following SNL, showed a higher PWT than those of the vehicle-treated group during the observation period ( $P < 0.001$ ). These results indicate that gabexate mesilate attenuate the development of mechanical allodynia induced by SNL.

Reference: Korean J Pain. 2020 Jan; 33(1): 30–39. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6944363/>

*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.*