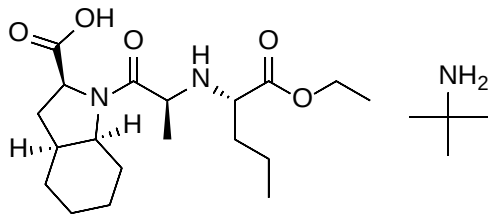
Product data sheet

MedKoo Cat#: 318472 Name: Perindopril Erbumine CAS: 107133-36-8 (erbumine) Chemical Formula: $C_{23}H_{43}N_3O_5$ Molecular Weight: 441.613	
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:

Perindopril Erbumine is an angiotensin-converting enzyme inhibitor. It is used in patients with hypertension and heart failure. Upon hydrolysis, perindopril erbumine is converted to its active form perindoprilat, inhibiting ACE and the conversion of angiotensin I to angiotensin II; consequently, angiotensin II-mediated vasoconstriction and angiotensin II-stimulated aldosterone secretion from the adrenal cortex are inhibited and diuresis and natriuresis ensue.

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	10.0	22.64
Ethanol	88.0	199.27
Water	50.0	113.22

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.26 mL	11.32 mL	22.64 mL
5 mM	0.45 mL	2.26 mL	4.53 mL
10 mM	0.23 mL	1.13 mL	2.26 mL
50 mM	0.05 mL	0.23 mL	0.45 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. Yasumatsu R, Nakashima T, Masuda M, Ito A, Kuratomi Y, Nakagawa T, Komune S. Effects of the angiotensin-I converting enzyme inhibitor perindopril on tumor growth and angiogenesis in head and neck squamous cell carcinoma cells. J Cancer Res Clin Oncol. 2004 Oct;130(10):567-73. doi: 10.1007/s00432-004-0582-7. Epub 2004 Jul 27. PMID: 15449186.
2. Yoshiji H, Kuriyama S, Kawata M, Yoshii J, Ikenaka Y, Noguchi R, Nakatani T, Tsujinoue H, Fukui H. The angiotensin-I-converting enzyme inhibitor perindopril suppresses tumor growth and angiogenesis: possible role of the vascular endothelial growth factor. Clin Cancer Res. 2001 Apr;7(4):1073-8. PMID: 11309359.

In vivo study

1. Connolly K, Batacan R Jr, Jackson D, Vella R, Fenning A. Perindopril prevents development of obesity and hypertension in middle aged diet-induced obese rat models of metabolic syndrome. Life Sci. 2023 Feb 1;314:121291. doi: 10.1016/j.lfs.2022.121291. Epub 2022 Dec 16. PMID: 36535403.
2. Dong YF, Kataoka K, Tokutomi Y, Nako H, Nakamura T, Toyama K, Sueta D, Koibuchi N, Yamamoto E, Ogawa H, Kim-Mitsuyama S. Perindopril, a centrally active angiotensin-converting enzyme inhibitor, prevents cognitive impairment in mouse models of Alzheimer's disease. FASEB J. 2011 Sep;25(9):2911-20. doi: 10.1096/fj.11-182873. Epub 2011 May 18. PMID: 21593435.

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7. Bioactivity

Biological target:

Perindopril erbumine (Perindopril tert-butylamine salt) is a potent ACE inhibitor.

In vitro activity

In the in vitro cell proliferation assays, there was no significant difference between the perindopril-treated group and the control group. However, the perindoprilat-treated group showed a significant reduction in mRNA expression of VEGF and inhibited the induction activity of the VEGF promoter in comparison to the control group. Perindoprilat treatment also significantly suppressed angiotensin II production in vitro.

Reference: J Cancer Res Clin Oncol. 2004 Oct;130(10):567-73. https://pubmed.ncbi.nlm.nih.gov/15449186/

In vivo activity

Perindopril, with significant inhibition of hippocampal ACE, significantly prevented cognitive impairment in this AD mouse model. This study next examined the protective effects of perindopril on cognitive impairment in PS2APP-transgenic mice overexpressing Aβ in the brain. Perindopril, without affecting brain Aβ deposition, significantly suppressed the increase in hippocampal ACE activity and improved cognition in PS2APP-transgenic mice, being associated with the suppression of hippocampal astrocyte activation and attenuation of superoxide.

Reference: FASEB J. 2011 Sep;25(9):2911-20. https://pubmed.ncbi.nlm.nih.gov/21593435/

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.