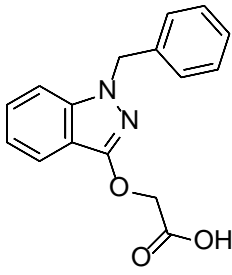


Product data sheet



MedKoo Cat#: 329308 Name: Bendazac CAS#: 20187-55-7 Chemical Formula: C ₁₆ H ₁₄ N ₂ O ₃ Exact Mass: 282.1004 Molecular Weight: 282.30	
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:

Bendazac, also known as Bendazolic acid and AF-983, is an anticataract drug. It has been reported that Bendazac acts by preventing protein denaturation.

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	250.0	885.58

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.54 mL	17.71 mL	35.42 mL
5 mM	0.71 mL	3.54 mL	7.08 mL
10 mM	0.35 mL	1.77 mL	3.54 mL
50 mM	0.07 mL	0.35 mL	0.71 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. Soldo L, Ruggieri A, Milanese C, Pinza M, Guglielmotti A. Bendazac lysine inhibition of human lens epithelial cell adhesion to polymethylmethacrylate intraocular lenses. *Ophthalmic Res.* 2004 May-Jun;36(3):145-50. doi: 10.1159/000077327. PMID: 15103205.

In vivo study

1. Yu JX, Yin XX, Shen JP, Qiu J, Yin HL, Jiang SJ. Protective effects of bendazac lysine on diabetic peripheral neuropathy in streptozotocin-induced diabetic rats. *Clin Exp Pharmacol Physiol.* 2006 Dec;33(12):1231-8. doi: 10.1111/j.1440-1681.2006.04515.x. PMID: 17184506.

7. Bioactivity

Biological target: Bendazac is an oxyacetic acid with anti-inflammatory, antinecrotic, choleric and antilipidaemic properties.

In vitro activity

The effect of bendazac lysine on the human lens epithelial cell line HLE-B3 adhesion to polymethylmethacrylate (PMMA) intraocular lenses (IOLs) was evaluated. After adherence to IOLs, cells were incubated in the presence of the drug for 24 h. Results obtained show that bendazac is able to induce a linear dose-dependent inhibition of HLE-B3 adhesiveness to PMMA IOLs. In particular, treatment with bendazac 33, 100 and 300 microM resulted in a 15, 32 and 54% inhibition, respectively. Statistical analysis shows that this effect is significant at 100 microM ($p < 0.05$) and 300 microM ($p < 0.01$). The analysis of the effects of bendazac on the viability

Product data sheet



and on the proliferative capacity of HLE-B3 cells did not show any drug-related toxicity up to the concentration of 400 microM. These results demonstrate that bendazac lysine is able to inhibit adhesion of lens epithelial cells to PMMA IOLs and suggests the potential beneficial use of this drug in preventing secondary cataract development.

Reference: Ophthalmic Res. 2004 May-Jun;36(3):145-50. <https://www.karger.com/Article/Abstract/77327>

In vivo activity

The effects of bendazac lysine (BDL) on experimental diabetic peripheral neuropathy (DPN) in rats were evaluated. Diabetic rats without treatment showed hypopraxia, polydipsia, polyuria, slow weight gain, cataract, increased tail-flick threshold temperature, decreased motor nerve conduction velocity (nd induced pathological morphological changes of myelinated nerve fibres. All these symptoms were ameliorated in diabetic rats treated with BDL. Bendazac lysine ameliorated the blood glucose concentration, glycosylated haemoglobin levels and insulin levels in the plasma of diabetic rats, reduced aldose reductase activity in erythrocytes and advanced glycation end-products in both nerves and serum and increase the activity of glutathione peroxidase in the nerves and Na(+)/K(+)-ATPase in the nerves and erythrocytes. The results suggest that bendazac lysine exerts its protective effects against the progression of diabetic peripheral neuropathy in STZ-diabetic rats through multiple mechanisms and is a potential drug for the prevention of deterioration in DPN.

Reference: Clin Exp Pharmacol Physiol. 2006 Dec;33(12):1231-8. <https://onlinelibrary.wiley.com/doi/10.1111/j.1440-1681.2006.04515.x>

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.