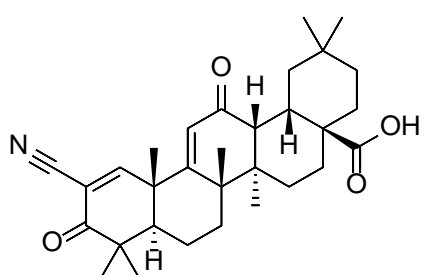


# Product data sheet



MedKoo Cat#: 329647 Name: Bardoxolone CAS#: 218600-44-3 Chemical Formula: C <sub>31</sub> H <sub>41</sub> NO <sub>4</sub> Exact Mass: 491.3036 Molecular Weight: 491.67		
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:

Bardoxolone, also known as RTA-401 and CDDO, is a synthetic oleanane triterpenoid. Bardoxolone blocks the cellular synthesis of inducible nitric oxide synthase and inducible COX-2 in INF- $\gamma$ -activated mouse macrophages with an IC<sub>50</sub> value of 0.4 nM.

## 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	5.0	10.2

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.03 mL	10.17 mL	20.34 mL
5 mM	0.41 mL	2.03 mL	4.07 mL
10 mM	0.20 mL	1.02 mL	2.03 mL
50 mM	0.04 mL	0.20 mL	0.41 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. Song MK, Lee JH, Ryoo IG, Lee SH, Ku SK, Kwak MK. Bardoxolone ameliorates TGF- $\beta$ 1-associated renal fibrosis through Nrf2/Smad7 elevation. *Free Radic Biol Med.* 2019 Jul;138:33-42. doi: 10.1016/j.freeradbiomed.2019.04.033. Epub 2019 May 3. PMID: 31059771.

### In vivo study

1. Song MK, Lee JH, Ryoo IG, Lee SH, Ku SK, Kwak MK. Bardoxolone ameliorates TGF- $\beta$ 1-associated renal fibrosis through Nrf2/Smad7 elevation. *Free Radic Biol Med.* 2019 Jul;138:33-42. doi: 10.1016/j.freeradbiomed.2019.04.033. Epub 2019 May 3. PMID: 31059771.

## 7. Bioactivity

Biological target: Bardoxolone is a nuclear regulator factor (Nrf-2) activator.

### In vitro activity

Bardoxolone (BARD; CDDO-methyl), a pharmacological activator of Nrf2, increased Smad7 levels and attenuated TGF- $\beta$ /Smad/ECM expression in MES-13.

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Reference: Free Radic Biol Med. 2019 Jul;138:33-42.

<https://www.sciencedirect.com/science/article/abs/pii/S0891584919300589?via%3Dihub>

## In vivo activity

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In an aristolochic acid (AA)-mediated nephropathy mouse model, the renal expression of Nrf2 and Smad7 was elevated by BARD treatment, and AA-induced tubular necrosis and interstitial fibrosis were substantially ameliorated by BARD.

Reference: Free Radic Biol Med. 2019 Jul;138:33-42.

<https://www.sciencedirect.com/science/article/abs/pii/S0891584919300589?via%3Dihub>

*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.*