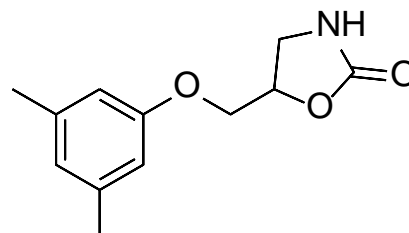


# Product data sheet



MedKoo Cat#: 318196	
Name: Metaxalone	
CAS: 1665-48-1	
Chemical Formula: C <sub>12</sub> H <sub>15</sub> NO <sub>3</sub>	
Exact Mass: 221.1052	
Molecular Weight: 221.256	
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:

Metaxalone is a muscle relaxant used to relax muscles and relieve pain caused by strains, sprains, and other musculoskeletal conditions. It is considered to be a moderately strong muscle relaxant, with relatively low incidence of side effects. Metaxalone appears to interact with the cytochrome p450 system and may act as a general central nervous system depressant.

## 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
DMF	30.0	135.59
DMF:PBS (pH 7.2) (1:1)	0.5	2.26
DMSO	54.67	247.07
Ethanol	27.0	122.03

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	4.52 mL	22.60 mL	45.20 mL
5 mM	0.90 mL	2.52 mL	9.04 mL
10 mM	0.45 mL	2.26 mL	4.52 mL
50 mM	0.90 mL	0.45 mL	0.90 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

Pallio G, D'Ascola A, Cardia L, Mannino F, Bitto A, Minutoli L, Picciolo G, Squadrito V, Irrera N, Squadrito F, Altavilla D. MAO-A Inhibition by Metaxalone Reverts IL-1 $\beta$ -Induced Inflammatory Phenotype in Microglial Cells. Int J Mol Sci. 2021 Aug 5;22(16):8425. doi: 10.3390/ijms22168425. PMID: 34445126; PMCID: PMC8395141.

### In vivo study

Yamaguchi M, Levy RM. Metaxalone Suppresses Production of Inflammatory Cytokines Associated with Painful Conditions in Mouse Macrophages RAW264.7 Cells in Vitro: Synergistic Effect with  $\beta$ -caryophyllene. Curr Mol Med. 2020;20(8):643-652. doi: 10.2174/1566524020666200217102508. PMID: 32065089.

## 7. Bioactivity

### Biological target:

Metaxalone (AHR438;NSC170959) is a muscle relaxant used to relax muscles.

# Product data sheet



## In vitro activity

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The aim of this study was to investigate whether metaxalone might exert antioxidant and anti-inflammatory effects in HMC3 microglial cells. Control cells and IL-1 $\beta$ -stimulated cells were subsequently treated with metaxalone (10, 20, and 40  $\mu$ M) for six hours. Metaxalone decreased MAO-A activity and expression, reduced NF-kB, TNF- $\alpha$ , and IL-6, enhanced IL-13, and also increased PPAR $\gamma$ , PGC-1 $\alpha$ , and Nrf2 expression.

Reference: Int J Mol Sci. 2021 Aug 5;22(16):8425. <https://pubmed.ncbi.nlm.nih.gov/34445126/>

## In vivo activity

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Mouse macrophage RAW264.7 cells were cultured in Dulbecco's Modification of Eagle's Medium containing 10% fetal bovine serum in the presence of metaxalone. Metaxalone (1-100  $\mu$ M) was found to decrease the number of macrophages by inhibiting the proliferation and stimulating the death of RAW264.7 cells in vitro. Furthermore, levels of caspase-3 were increased by metaxalone or  $\beta$ -caryophyllene and enhanced by their combination.

Reference: Curr Mol Med. 2020;20(8):643-652. <https://pubmed.ncbi.nlm.nih.gov/32065089/>

*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.*