

# Product data sheet



MedKoo Cat#: 406664 Name: DY131 CAS: 95167-41-2 Chemical Formula: C <sub>18</sub> H <sub>21</sub> N <sub>3</sub> O <sub>2</sub> Exact Mass: 311.1634 Molecular Weight: 311.385	
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:

DY131, also known as GSK-9089, is a novel selective agonist at estrogen-related receptors ERR $\beta$  and ERR $\gamma$ . DY131 could potentiate the ERR $\gamma$ -induced growth inhibition in LNCaP-ERR $\gamma$  and DU145-ERR $\gamma$  cells in a dose-dependent manner. ERR $\gamma$  may perform an antiproliferative or tumor-suppressing function in prostate cancer cells. ERR $\gamma$  could be a novel therapeutic target for prostate cancer treatment.

## 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	2.0	6.42
DMSO	36.54	117.33
DMSO:PBS (pH 7.2) (1:1)	0.5	1.61
Ethanol	3.11	10.0

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.21 mL	16.06 mL	32.11 mL
5 mM	0.64 mL	3.21 mL	6.42 mL
10 mM	0.32 mL	1.61 mL	3.21 mL
50 mM	0.06 mL	0.32 mL	0.64 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. Yamamoto T, Mori T, Sawada M, Kuroboshi H, Tatsumi H, Yoshioka T, Matsushima H, Iwasaku K, Kitawaki J. Estrogen-related receptor- $\gamma$  regulates estrogen receptor- $\alpha$  responsiveness in uterine endometrial cancer. *Int J Gynecol Cancer*. 2012 Nov;22(9):1509-16. doi: 10.1097/IGC.0b013e31826fd623. PMID: 23051957.
2. Wang Y, Arvanites AC, Davidow L, Blanchard J, Lam K, Yoo JW, Coy S, Rubin LL, McMahon AP. Selective identification of hedgehog pathway antagonists by direct analysis of smoothed ciliary translocation. *ACS Chem Biol*. 2012 Jun 15;7(6):1040-8. doi: 10.1021/cb300028a. Epub 2012 May 3. PMID: 22554036; PMCID: PMC3905677.

### In vivo study

1. Ma H, Liu J, Du Y, Zhang S, Cao W, Jia Z, Gong W, Zhang A. Estrogen-Related Receptor  $\gamma$  Agonist DY131 Ameliorates Lipopolysaccharide-Induced Acute Liver Injury. *Front Pharmacol*. 2021 Apr 23;12:626166. doi: 10.3389/fphar.2021.626166. PMID: 33967760; PMCID: PMC8104008.

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2. Huang B, Mu P, Yu Y, Zhu W, Jiang T, Deng R, Feng G, Wen J, Zhu X, Deng Y. Inhibition of EZH2 and activation of ERR $\gamma$  synergistically suppresses gastric cancer by inhibiting FOXM1 signaling pathway. *Gastric Cancer*. 2021 Jan;24(1):72-84. doi: 10.1007/s10120-020-01097-x. Epub 2020 Jun 11. PMID: 32529327.

## 7. Bioactivity

### Biological target:

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DY131 (GSK 9089) is a potent and selective ERR $\gamma$  and ERR $\beta$  agonist.

### In vitro activity

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A selective ERR $\gamma$  agonist, DY131, inhibited the growth of the ER $\alpha$ -positive endometrial cancer cells but promoted that of the ER $\alpha$ -negative cancer cells.

Reference: *Int J Gynecol Cancer*. 2012 Nov;22(9):1509-16. <https://pubmed.ncbi.nlm.nih.gov/23051957/>

### In vivo activity

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Mice were pretreated with DY131 through intraperitoneal injection at a dose of 5 mg/kg/day for 3 days prior to LPS challenge (10 mg/kg). Pretreatment with DY131 ameliorated LPS-induced liver injury as demonstrated by reduced liver enzyme release (ALT, AST, and LDH), improved liver morphological damage, and attenuated oxidative stress, inflammation and apoptosis.

Reference: *Front Pharmacol*. 2021 Apr 23;12:626166. <https://pubmed.ncbi.nlm.nih.gov/33967760/>

*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.*