

# Product data sheet



MedKoo Cat#: 464126 Name: RB394 CAS: 1830320-32-5 Chemical Formula: C <sub>21</sub> H <sub>22</sub> F <sub>3</sub> NO <sub>4</sub> Exact Mass: 409.1501 Molecular Weight: 409.41	
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.

## Product description:

RB394 is a dual sEH/PPAR $\gamma$  modulator.

## 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	25	61.06
DMSO	33	80.60
Ethanol	5	12.21

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.44 mL	12.21 mL	24.43 mL
5 mM	0.49 mL	2.44 mL	4.89 mL
10 mM	0.24 mL	1.22 mL	2.44 mL
50 mM	0.05 mL	0.24 mL	0.49 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

To be determined

In vivo study

- Hartmann M, Bibli SI, Tews D, Ni X, Kircher T, Kramer JS, Kilu W, Heering J, Hernandez-Olmos V, Weizel L, Scriba GKE, Krait S, Knapp S, Chaikuad A, Merk D, Fleming I, Fischer-Posovszky P, Proschak E. Combined Cardioprotective and Adipocyte Browning Effects Promoted by the Eutomer of Dual sEH/PPAR $\gamma$  Modulator. *J Med Chem.* 2021 Mar 11;64(5):2815-2828. doi: 10.1021/acs.jmedchem.0c02063. Epub 2021 Feb 23. PMID: 33620196.
- Stavniichuk A, Hye Khan MA, Yeboah MM, Chesnik MA, Jankiewicz WK, Hartmann M, Blöcher R, Kircher T, Savchuk O, Proschak E, Imig JD. Dual soluble epoxide hydrolase inhibitor/PPAR- $\gamma$  agonist attenuates renal fibrosis. *Prostaglandins Other Lipid Mediat.* 2020 Oct;150:106472. doi: 10.1016/j.prostaglandins.2020.106472. Epub 2020 Jun 20. PMID: 32569747.
- Hye Khan MA, Kolb L, Skibba M, Hartmann M, Blöcher R, Proschak E, Imig JD. A novel dual PPAR- $\gamma$  agonist/sEH inhibitor treats diabetic complications in a rat model of type 2 diabetes. *Diabetologia.* 2018 Oct;61(10):2235-2246. doi: 10.1007/s00125-018-4685-0. Epub 2018 Jul 21. PMID: 30032428; PMCID: PMC6563928.

## 7. Bioactivity

Biological target:

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RB394 is an orally bioavailable, dual modulator of soluble epoxide hydrolase (sEH) and PPAR $\gamma$  that inhibits sEH with an IC<sub>50</sub> of 0.33  $\mu$ M and activates PPAR $\gamma$  with an EC<sub>50</sub> of 0.3  $\mu$ M. It is inactive at PPAR $\delta$  and shows 29% activation of PPAR $\alpha$ , relative to control, at 10  $\mu$ M. RB394 is water soluble, orally bioavailable, and can be delivered through drinking water.

## In vitro activity

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To be determined

## In vivo activity

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RB394 can attenuate renal fibrosis in a mouse unilateral ureteral obstruction model by reducing renal inflammation, oxidative stress, tubular injury, and vascular injury. RB394 demonstrates exciting potential as a therapeutic for renal fibrosis and chronic kidney disease.

Reference: Prostaglandins Other Lipid Mediat. 2020 Oct;150:106472. <https://pubmed.ncbi.nlm.nih.gov/32569747/>

*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.*