

# Product data sheet



MedKoo Cat#: 525705 Name: MK-8245 CAS: 1030612-90-8 (free base) Chemical Formula: C <sub>15</sub> H <sub>14</sub> BrFN <sub>6</sub> O <sub>2</sub> Molecular Weight: 467.2554	
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:

MK-8245 is a potent, liver-targeted SCD inhibitor with preclinical antidiabetic and antidyslipidemic efficacy with a significantly improved therapeutic window. MK-8245 was believed to inhibit the SCD enzyme solely in the liver and not in other tissues for the following reasons. When SCD inhibition has been measured by desaturation index in tissues of rodents treated with MK-8245, the desaturation index was significantly reduced in liver but not in other tissues such as skin, eye and adipose tissue.

## 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	64.20
DMSO	74.33	159.09
DMSO:PBS (pH 7.2) (1:1)	0.5	1.07

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.14 mL	10.70 mL	21.40 mL
5 mM	0.43 mL	2.14 mL	4.28 mL
10 mM	0.21 mL	1.07 mL	2.14 mL
50 mM	0.04 mL	0.21 mL	0.43 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. Nio Y, Hasegawa H, Okamura H, Miyayama Y, Akahori Y, Hijikata M. Liver-specific mono-unsaturated fatty acid synthase-1 inhibitor for anti-hepatitis C treatment. *Antiviral Res.* 2016 Aug;132:262-7. doi: 10.1016/j.antiviral.2016.07.003. Epub 2016 Jul 5. PMID: 27392483.

### In vivo study

1. Yao Y, Sun S, Wang J, Fei F, Dong Z, Ke AW, He R, Wang L, Zhang L, Ji MB, Li Q, Yu M, Shi GM, Fan J, Gong Z, Wang X. Canonical Wnt Signaling Remodels Lipid Metabolism in Zebrafish Hepatocytes following Ras Oncogenic Insult. *Cancer Res.* 2018 Oct 1;78(19):5548-5560. doi: 10.1158/0008-5472.CAN-17-3964. Epub 2018 Jul 31. PMID: 30065049.

2. Oballa RM, Belair L, Black WC, Bleasby K, Chan CC, Desroches C, Du X, Gordon R, Guay J, Guiral S, Hafey MJ, Hamelin E, Huang Z, Kennedy B, Lachance N, Landry F, Li CS, Mancini J, Normandin D, Poci A, Powell DA, Ramtohul YK, Skorey K, Sørensen D, Sturkenboom W, Styhler A, Waddleton DM, Wang H, Wong S, Xu L, Zhang L. Development of a liver-targeted stearyl-CoA desaturase (SCD) inhibitor (MK-8245) to establish a therapeutic window for the treatment of diabetes and dyslipidemia. *J Med Chem.* 2011 Jul 28;54(14):5082-96. doi: 10.1021/jm200319u. Epub 2011 Jun 28. PMID: 21661758.

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## 7. Bioactivity

### Biological target:

MK-8245 is a potent, liver-targeted SCD inhibitor.

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### In vitro activity

MK8245 was evaluated using recombinant HCV culture systems. Considering current HCV treatments, to avoid the emergence of direct anti-viral agents-resistant viruses, combination therapy with direct anti-viral agents and host-targeted agents would be optimal. With this viewpoint, this study confirmed MK8245's additive or synergistic anti-HCV effects on current direct anti-viral agents and interferon-alpha therapy.

Reference: Antiviral Res. 2016 Aug;132:262-7. <https://pubmed.ncbi.nlm.nih.gov/27392483/>

### In vivo activity

These studies reveal novel Ras-dependent functions of Wnt signaling in remodeling the lipid metabolism of cancerous hepatocytes in zebrafish and identify the SCD inhibitor MK8245 as a candidate drug for therapeutic intervention.

Reference: Cancer Res. 2018 Oct 1;78(19):5548-5560. <https://pubmed.ncbi.nlm.nih.gov/30065049/>

*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.*