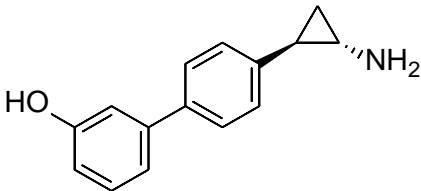


# Product data sheet



MedKoo Cat#: 584450 Name: OG-L002 CAS: 1357302-64-7 Chemical Formula: C <sub>15</sub> H <sub>15</sub> NO Exact Mass: 225.1154 Molecular Weight: 225.291		
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:

OG-L002 is a potent LSD1 inhibitor that has been found to inhibit herpes simplex virus (HSV) immediate early gene expression and viral yield in vitro and suppresses HSV primary infection in vivo.

## 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	50.0	221.94
DMSO	91.88	407.84
DMSO:PBS (pH 7.2) (1:1)	0.5	2.22
Ethanol	17.18	76.24

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	4.44 mL	22.19 mL	44.39 mL
5 mM	0.89 mL	4.44 mL	8.88 mL
10 mM	0.44 mL	2.22 mL	4.44 mL
50 mM	0.09 mL	0.44 mL	0.89 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. Tallmadge RL, Žygelytė E, Van de Walle GR, Kristie TM, Felipe MJB. Effect of a Histone Demethylase Inhibitor on Equine Herpesvirus-1 Activity In Vitro. *Front Vet Sci*. 2018 Mar 12;5:34. doi: 10.3389/fvets.2018.00034. PMID: 29594155; PMCID: PMC5857540.

2. Liang Y, Quenelle D, Vogel JL, Mascaro C, Ortega A, Kristie TM. A novel selective LSD1/KDM1A inhibitor epigenetically blocks herpes simplex virus lytic replication and reactivation from latency. *mBio*. 2013 Feb 5;4(1):e00558-12. doi: 10.1128/mBio.00558-12. PMID: 23386436; PMCID: PMC3565832.

### In vivo study

1. Seifermann M, Ulges A, Bopp T, Melcea S, Schäfer A, Oka S, Nakabeppu Y, Klungland A, Niehrs C, Epe B. Role of the DNA repair glycosylase OGG1 in the activation of murine splenocytes. *DNA Repair (Amst)*. 2017 Oct;58:13-20. doi: 10.1016/j.dnarep.2017.08.005. Epub 2017 Aug 12. PMID: 28843610.

# Product data sheet



## 7. Bioactivity

### Biological target:

OG-L002 is a potent and highly selective LSD1 inhibitor with an IC<sub>50</sub> of 0.02  $\mu$ M.

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### In vitro activity

As shown in Fig. 2, compound OG-L002, which is highly specific to LSD1 (IC<sub>50</sub>, ~0.02  $\mu$ M), potently inhibited the expression of viral IE (ICP27 and ICP4) genes, but not cellular control genes. As shown, OG-L002 inhibited viral IE gene expression in both cells with a significantly reduced IC<sub>50</sub> (IC<sub>50</sub>, ~10  $\mu$ M in HeLa cells; IC<sub>50</sub>, ~3  $\mu$ M in HFF cells) relative to the control MAOI TCP (IC<sub>50</sub>, ~1 mM). In addition, OG-L002 potently reduced viral yields (~100-fold) in comparison to control DMSO treatment.

Reference: mBio. 2013 Feb 5;4(1):e00558-12. <https://pubmed.ncbi.nlm.nih.gov/23386436/>

### In vivo activity

Here, this study analysed the activation by lipopolysaccharide (LPS) of primary splenocytes obtained from two different Ogg1<sup>-/-</sup> mouse strains. This study found that the induction of TNF- $\alpha$  expression was reduced in splenocytes (in particular macrophages) of both Ogg1<sup>-/-</sup> strains. Notably, an inhibitor of LSD1, OG-L002, reduced the induction of TNF- $\alpha$  mRNA in splenocytes from wild-type mice to the level observed in splenocytes from Ogg1<sup>-/-</sup> mice and had no influence in the latter cells.

Reference: DNA Repair (Amst). 2017 Oct;58:13-20. <https://pubmed.ncbi.nlm.nih.gov/28843610/>

*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.*