

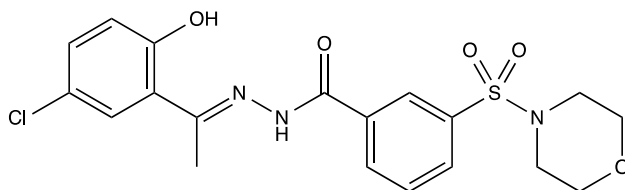
**Catalog # 10-4019**

**SP2509**

(E)-N'-(1-(5-Chloro-2-hydroxyphenyl)ethylidene)-3-(morpholinofonyl)benzohydrazide; HCl2509

CAS# 1423715-09-6

Lot # FBS2131



SP2509 is a potent ( $IC_{50} = 13$  nM) and reversible inhibitor of the histone demethylase LSD1 (KDM1A).<sup>1</sup> It is inactive against the closely related flavin enzymes MAO A,B as well as lactate dehydrogenase, several CYP's and hERG. LSD1 regulates the balance between self-renewal and differentiation of stem cells and is highly expressed in various cancers.<sup>2-6</sup> SP2509 promotes autophagy in neuroblastoma cells.<sup>7</sup>

- 1) Sorna, *et al.* (2013), *High-Throughput Virtual Screening Identifies Novel N'-(1-Phenylethylidene)-benzohydrazides as Potent, Specific, and Reversible LSD1 Inhibitors*; J.Med.Chem. **56** 9496
- 2) Hosseini and Minucci (2017), *A comprehensive review of lysine-specific demethylase 1 and its roles in cancer*; Epigenomics **9** 1123
- 3) Fiskus *et al.* (2014), *Highly effective combination of LSD1 (KDM1A) antagonist and pan-histone deacetylase inhibitor against human AML cells*; Leukemia **28** 2155
- 4) Wen *et al.* (2018), *Novel combination of histone methylation modulators with therapeutic synergy against acute myeloid leukemia in vitro and in vivo*; Cancer Lett. **413** 35
- 5) Tsai *et al.* (2018), *Stress-induced phosphoprotein 1 acts as a scaffold protein for glycogen synthase kinase-3 beta-mediated phosphorylation of lysine-specific demethylase 1*; Oncogenesis **7** 31
- 6) Lu *et al.* (2018), *Hypoxia Promotes Resistance to EGFR Inhibition in NSCLC Cells via the Histone Demethylases LSD1 and PLU-1*; Mol.Cancer Epub ahead of print June 22, 2018
- 7) Ambrosio *et al.* (2017), *Lysine-specific demethylase LSD1 regulates autophagy in neuroblastoma through SESN2-deoendent pathway*; Oncogene **36** 36701

**PHYSICAL DATA**

Molecular Weight: 437.90

Molecular Formula: C<sub>19</sub>H<sub>20</sub>ClN<sub>3</sub>O<sub>5</sub>S

Purity: >98% by HPLC

NMR: Conforms

Solubility: DMSO (>25 mg/mL)

Physical Description: White solid

Storage and Stability: Store as supplied desiccated at -20°C for up to 1 year from the date of purchase.

Solutions in DMSO may be stored at -20°C for up to 3 months.

**Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.**