

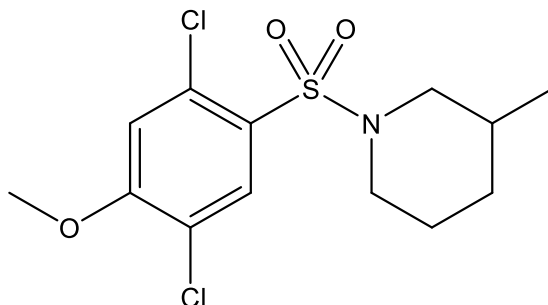
**Catalog # 10-4655**

**AE 51310**

CAS# 433966-92-8

1-(2,5-Dichloro-4-methoxyphenyl)sulfonyl-3-methylpiperidine

Lot # JKM1289



AE 51310 is a potent antagonist of the GPCR OPN4/melanopsin ( $K_i = 0.096$  nM human OPN4).<sup>1</sup> OPN4 regulates circadian rhythms, pupil functions, melatonin expression, cognition, and sleep. OPN4 has been found to bind  $G_{\alpha 11}$  in lung cancer cells modulating PKC activation leading to activation of BRAF/MEK/ERK signaling pathways. AE 51310 decreased the growth and proliferation of both LG17 and LG55 lung cancer tumors in mouse xenograft models.<sup>2</sup>

- 1) Jones *et al.* (2013), *Small-molecule antagonists of melanopsin-mediated phototransduction*; Nat. Chem. Biol. **9** 630
- 2) Wang *et al.* (2020), *Targeting Opsin4/Melanopsin with a Novel Small Molecule Suppresses PKC/RAF/MEK/ERK Signaling and Inhibits Lung Adenocarcinoma Progression*; Mol. Cancer Res. **18** 1028

**PHYSICAL DATA**

Molecular Weight: 338.24  
Molecular Formula: C<sub>13</sub>H<sub>17</sub>Cl<sub>2</sub>NO<sub>3</sub>S  
Purity: >99% by HPLC  
NMR: (Conforms)  
Solubility: DMSO (>25 mg/ml)  
Physical Description: White solid  
Storage and Stability: Store as supplied 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.**