



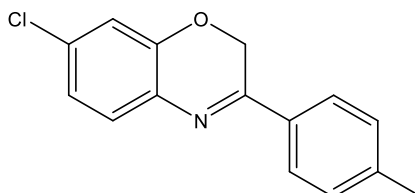
Catalog # 10-5515

AR7

CAS# 80306-38-3

7-Chloro-3-(4-methylphenyl)-2H-1,4-benzoxazine

Lot # X109521



AR7 (80306-38-3) is an atypical retinoid which acts as an RAR α antagonist and activates chaperone-mediated autophagy (CMA) via an RAR-dependent pathway.¹ Downstream signaling results in an increase of LAMP-2A expression.¹ Cells pretreated with AR7 had markedly improved viability in a paraquat-induced oxidative stress model.¹ AR7 stimulated CMA and attenuated accumulation of SNCA oligomers in prolonged cultures of mutant cortical neurons² indicating that CMA activation may be a viable disease modifying strategy in Parkinson's disease³. A targetome analysis of AR7-induced CMA in cancer cells has been performed.⁴

References/Citations:

- 1) Anguiano *et al.* (2013), *Chemical modulation of chaperone-mediated autophagy by retinoic acid derivatives*; Nat. Chem. Biol. **9** 374
- 2) Ho *et al.* (2020), *Age-dependent accumulation of oligomeric SNCA/ α -synuclein from impaired degradation in mutant LRRK2 knockin mouse model of Parkinson disease: role for therapeutic activation of chaperone-mediated autophagy (CMA)*; Autophagy **16** 347
- 3) Bonam *et al.* (2021), *Autophagy-Lysosomal Pathway as Potential Therapeutic Target in Parkinson's Disease*; Cells **10** 3547
- 4) Hao *et al.* (2019), *Targetome analysis of chaperone-mediated autophagy in cancer cells*; Autophagy **15** 1558

PHYSICAL DATA

Molecular Weight: 257.72
Molecular Formula: C₁₅H₁₂ClNO
Purity: >98% by TLC
NMR: (Conforms)
Solubility: DMSO (30 mg/mL)
Physical Description: Pale pink solid
Storage and Stability: Store as supplied at -20° for up to 2 years from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 1 month.

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