

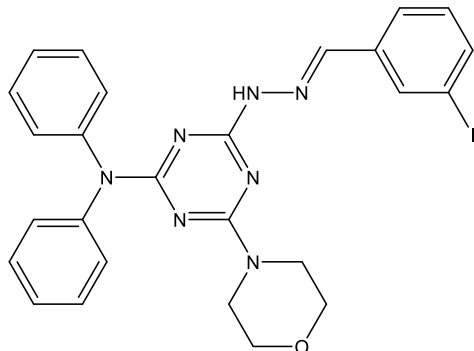
Catalog # 10-5151

Vacuolin-1

CAS# 351986-85-1

3-Iodobenzaldehyde, 2-[4-(diphenylamino)-6-(4-morpholinyl)-1,3,5-triazin-2-yl]hydrazone

Lot # R110553



Vacuolin-1 inhibits autophagy *via* inhibition of Ca²⁺-dependent fusion of lysosomes with the plasma membrane and the release of lysosomal content and has no effect on other membrane-bound organelles.¹ It has been shown to block endosome maturation by activating RAB5 which compromises the biogenesis and function of lysosomes including autophagosomal-lysosomal fusion and endosomal-lysosomal degradation.² It potently inhibits migration, invasion and colony formation of cancer cells (which is linked to endosomal trafficking) and targets capping protein Z β (CapZ β) in these processes.³ Inhibition of lysosomal maturation was shown to be due to potent inhibition of PIKfyve.⁴

- 1) Cerny *et al.* (2004), *The small chemical vacuolin-1 inhibits Ca(2+)-dependent exocytosis but not cell resealing*; EMBO Rep., **5** 883
- 2) Lu *et al.* (2014), *Vacuolin-1 potently and reversibly inhibits autophagosome-lysosome fusion by activating RAB5A*; Autophagy, **10** 1895
- 3) Zuodong *et al.* (2021), *Vacuolin-1 inhibits endosomal trafficking and metastasis via CapZ β* ; Oncogene, **40** 1775
- 4) Sano *et al.* (2016), *Vacuolin-1 inhibits autophagy by impairing lysosomal maturation via PIKfyve*; FEBS Lett., **590** 1576

PHYSICAL DATA

Molecular Weight: 577.43
Molecular Formula: C₂₆H₂₄IN₇O
Purity: >98% by TLC
NMR: (Conforms)
Solubility: DMSO (35 mg/ml)
Physical Description: White solid
Storage and Stability: Store as supplied desiccated at -20°C for up to 2 years 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.