

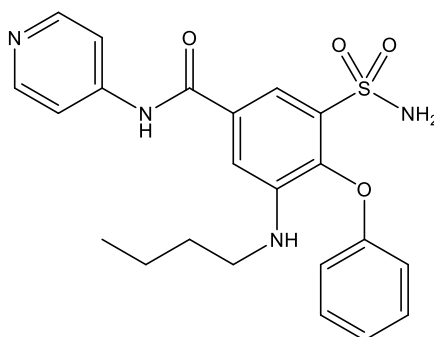
Catalog # 10-5723

AqB013

CAS# 1021869-51-1

3-(Butylamino)-4-phenoxy-N-(pyridine-4-yl)-5-sulfamoylbenzamide

Lot # S107088



AqB013 is a selective aquaporin-1 and -4 inhibitor ($IC_{50} \sim 20 \mu\text{M}$) which acts at the cytoplasmic side of the AQP water pore.¹ It blocks cGMP-stimulated human retinal pigment epithelium fluid transport.² In HT29 colon cancer cells AqB013 restricted migration and invasiveness and prevented endothelial tube formation.^{3,4} It reduces the invasiveness of U87-MG and U251-MG glioblastoma cells *in vitro*.⁵

- 1) Migliati *et al.* (2009); *Inhibition of aquaporin-1 and aquaporin-4 water permeability by a derivative of the loop diuretic bumetanide acting at an internal pore-occluding binding site*; Mol. Pharmacol., **76** 105
- 2) Baetz *et al.* (2012); *Stimulation of aquaporin-mediated fluid transport by cyclic GMP in human retinal pigment epithelium in vitro*, Invest. Ophthalmol. Vis. Sci., **53** 2127
- 3) Dorward *et al.* (2016); *Pharmacological blockade of aquaporin-1 water channel by AqB013 restricts migration and invasiveness of colon cancer cells and prevents endothelial tube formation in vitro*, J. Exp. Clin. Cancer Res., **35** 36
- 4) Tomita *et al.* (2019); *Bumetanide-Derived Aquaporin 1 Inhibitors AqB013 and AqB050 Inhibit Tube Formation of Endothelial Cells through Induction of Apoptosis and Impaired Migration in Vitro*, Int. J. Mol. Sci., **20** 1818
- 5) Varricchio *et al.* (2023); *Pharmacological Inhibition of Membrane Signaling Mechanisms Reduces the Invasiveness of U87-MG and U251-MG Glioblastoma Cells In Vitro*, Cancers (Basel), **15** 1027

PHYSICAL DATA

Molecular Weight:	440.52
Molecular Formula:	C ₂₂ H ₂₄ N ₄ O ₄ S
Purity:	>98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (30 mg/ml)
Physical Description:	Off-white solid
Storage and Stability:	Store as supplied at -20°C 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.

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