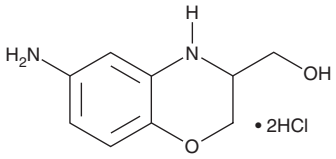
PRODUCT INFORMATION

ABO (hydrochloride)

Item No. 21515

CAS Registry No.: 2309172-24-3
Formal Name: 6-amino-3,4-dihydro-2H-1,4-benzoxazine-3-methanol, dihydrochloride
MF: $C_9H_{12}N_2O_2 \bullet 2HCl$
FW: 253.1
Purity: ≥95%
UV/Vis.: λ_{max}: 212, 255, 306 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

ABO (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the ABO (hydrochloride) in the solvent of choice, which should be purged with an inert gas. ABO (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of ABO (hydrochloride) in ethanol is approximately 5 mg/ml and approximately 2 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of ABO (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of ABO (hydrochloride) in PBS, pH 7.2, is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

ABO is a modulator of annexin A7.[1] It binds to Thr^{286} and inhibits phosphorylation of annexin A7 at threonine, but not serine or tyrosine, residues in human umbilical vein endothelial cells (HUVECs). ABO enhances the interaction between annexin A7 and the EF-hand protein GCA, decreases GCA phosphorylation as well as intracellular calcium concentration, and promotes autophagy in COS-7 cells. It also decreases phosphorylation of microtubule-associated protein 1 light chain (LC3) in HUVECs and suppresses oxidized low-density lipoprotein-induced increases in phosphatidylcholine-specific phospholipase C (PC-PLC) expression in vascular endothelial cells (VECs).[1,2] *In vivo*, ABO (50 or 100 mg/kg per day) decreases PC-PLC levels, enhances autophagy, and reduces apoptosis, lipid deposition, and atherosclerotic plaque area in the aortic endothelium of $apoE^{-/-}$ mice fed a Western diet.[2]

References

1. Li, H., Liu, N., Wang, S., *et al.* Identification of a small molecule targeting annexin A7. *Biochim. Biophys. Acta.* **1883(9)**, 2092-2099 (2013).
2. Li, H., Huang, S., Wang, S., *et al.* Targeting annexin A7 by a small molecule suppressed the activity of phosphatidylcholine-specific phospholipase C in vascular endothelial cells and inhibited atherosclerosis in apolipoprotein $E^{-/-}$ mice. *Cell Death Dis.* **4**, e806 (2013).

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