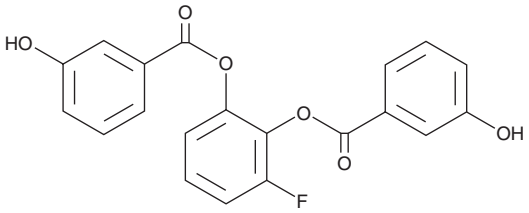
PRODUCT INFORMATION

WZB117

Item No. 19900

CAS Registry No.:	1223397-11-2
Formal Name:	3-hydroxy-benzoic acid, (3-fluoro-1,2-phenylene)ester
Synonym:	Glucose Transporter Inhibitor IV
MF:	$C_{20}H_{13}FO_6$
FW:	368.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 212, 242, 305 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

WZB117 is supplied as a crystalline solid. A stock solution may be made by dissolving the WZB117 in the solvent of choice, which should be purged with an inert gas. WZB117 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of WZB117 in ethanol is approximately 10 mg/ml and approximately 20 mg/ml in DMSO and DMF.

WZB117 is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

WZB117 is an irreversible inhibitor of glucose transporter 1 (Glut1) that blocks glucose transport in diverse cancer cells (IC_{50} = ~0.6 µM), reducing extracellular lactate and intracellular ATP levels.[1] It inhibits cancer cell proliferation (IC_{50}s = 5-10 µM), resulting in cell cycle arrest, senescence, and necrosis or apoptosis.[1,2] These effects are enhanced by the anticancer drugs cisplatin (Item No. 13119) and paclitaxel (Item No. 10461). WZB117, given intraperitoneally at 10 mg/kg, significantly reduces tumor size in mice, with only small reductions in body weight and leukocyte count.[1] WZB117 also inhibits the self-renewal and tumor-initiating capacity of cancer stem cells, blocking tumor initiation after implantation of cancer stem cells in mice.[3]

References

1. Liu, Y., Cao, Y., Zhang, W., *et al.* A small-molecule inhibitor of glucose transporter 1 downregulates glycolysis, induces cell-cycle arrest, and inhibits cancer cell growth *in vitro* and *in vivo*. *Mol. Cancer Ther.* **11(8)**, 1672-1682 (2012).
2. Xintaropoulou, C., Ward, C., Wise, A., *et al.* A comparative analysis of inhibitors of the glycolysis pathway in breast and ovarian cancer cell line models. *Oncotarget* **6(28)**, 25677-25695 (2015).
3. Shibuya, K., Okada, M., Suzuki, S., *et al.* Targeting the facilitative glucose transporter GLUT1 inhibits the self-renewal and tumor-initiating capacity of cancer stem cells. *Oncotarget* **6(2)**, 651-661 (2015).

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