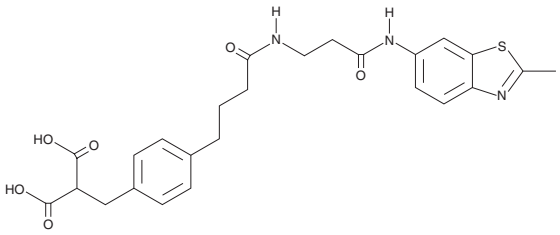
PRODUCT INFORMATION

AZ 33

Item No. 25444

CAS Registry No.: 1370290-34-8
Formal Name: 2-[[4-[4-[[3-[(2-methyl-6-benzothiazolyl)amino]-3-oxopropyl]amino]-4-oxobutyl]phenyl]methyl]-propanedioic acid
MF: $C_{25}H_{27}N_3O_6S$
FW: 497.6
Purity: ≥98%
UV/Vis.: λ_{max}: 223, 280 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

AZ 33 is supplied as a crystalline solid. A stock solution may be made by dissolving the AZ 33 in the solvent of choice. AZ 33 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of AZ 33 in ethanol is approximately 2 mg/ml and approximately 30 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 AZ 33 can be prepared by directly dissolving the crystalline solid in aqueous buffers. AZ 33 is slightly soluble in PBS, pH 7.2. We do not recommend storing the aqueous solution for more than one day.

Description

AZ 33 is an inhibitor of lactate dehydrogenase A (LDHA; K_d = 0.093 µM; IC_{50} = 0.5 µM).[1] It is selective for LDHA over LDHB in an NADH competition assay using recombinant enzymes (IC_{50}s = 0.54 and 3.6 µM, respectively).[2] AZ 33 is cell-impermeable and lacks cytotoxicity against HeLa cervical cancer cells (IC_{50} = >500 µM).

References

1. Ward, R.A., Brassington, C., Breeze, A.L., *et al.* Design and synthesis of novel lactate dehydrogenase A inhibitors by fragment-based lead generation. *J. Med Chem.* **55(7)**, 3285-3306 (2012).
2. Granchi, C., Calvaresi, E.C., Tuccinardi, T., *et al.* Assessing the differential action on cancer cells of LDH-A inhibitors based on the N-hydroxyindole-2-carboxylate (NHI) and malonic (Mal) scaffolds. *Org. Biomol. Chem.* **11(38)**, 6588-6596 (2013).

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