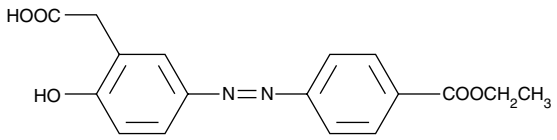
Product Information

CAY10397

Item No. 70130

CAS Registry No: 78028-01-0
Formal Name: 5-[[4-(ethoxycarbonyl)phenyl]azo]-2-hydroxy-benzeneacetic acid
Synonym: CK47A
MF: $C_{17}H_{16}N_2O_5$
FW: 328.3
Purity: ≥ 98%
Stability: ≥ 1 year at -20°C
Supplied as: A crystalline solid
UV/Vis: λ_{max}: 261, 370 nm



Laboratory Procedures

For long term storage, we suggest that CAY10397 be stored as supplied at -20°C. It should be stable for at least one year.

CAY10397 is supplied as a crystalline solid. A stock solution may be made by dissolving the CAY10397 in an organic solvent purged with an inert gas. CAY10397 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of CAY10397 in these solvents is approximately 10 mg/ml. CAY10397 will be stable for at least one year in these solvents if stored at -20°C.

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. CAY10397 is sparingly soluble in aqueous buffers. For maximum aqueous solubility, CAY10397 can be directly disolved in 0.1 M Na_2CO_3 (200 µg/ml) and then diluted with PBS (pH 7.2) to achieve the desired concentration or pH. We do not recommend storing the aqueous solution for more than one day.

Prostaglandins are rapidly inactivated *in vivo* by the action of 15-hydroxy prostaglandin dehydrogenase (15-hydroxy PGDH).[1] This enzyme oxidizes the 15-hydroxyl group and sets the stage for the PGΔ^{13}-reductase-mediated hydrogenation of the 13,14-double bond, producing 13,14-dihydro-15-keto metabolites with greatly reduced biological activity. CAY10397 is a potent, selective inhibitor of 15-hydroxy PGDH, with an IC_{50} of approximately 10 µM.[2] CAY10397 acts to prolong the lifetime and activity of endogenously produced prostaglandins both in cell culture and *in vivo*.

References

1. Berry, C.N., Hoult, J.R.S., Peers, S.H., *et al.* Inhibition of prostaglandin 15-hydroxydehydrogenase by sulphasalazine and a novel series of potent analogues. *Biochem. Pharmacol.* **32**, 2863-2871 (1983).
2. Okita, R.T. and Okita, J.R. Prostaglandin-metabolizing enzymes during pregnancy: Characterization of NAD^+-dependent prostaglandin dehydrogenase, carbonyl reductase, and cytochrome P450-dependent prostaglandin omega-hydroxylase. *Crit. Rev. Biochem. Mol. Biol.* **31**, 101-127 (1996).

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