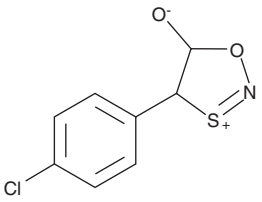
PRODUCT INFORMATION

CAY10564

Item No. 10010527

Formal Name:	4-(4-chlorophenyl)-4,5-dihydro-1,3,2-oxathiazol-3-ium-5-olate
Synonym:	4-chloro-4-phenyl-1,3,2-Oxathiazolidine-5-one, 4-(*p*-chlorophenyl)-1,3,2-Oxathiazolylium-5-olate
MF:	$C_8H_6ClNO_2S$
FW:	215.7
Purity:	≥98%
UV/Vis.:	λ_{max}: 202, 262, 412 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

CAY10564 is supplied as a crystalline solid. A stock solution may be made by dissolving the CAY10564 in the solvent of choice, purged with an inert gas. CAY10564 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of CAY10564 in ethanol is approximately 1 mg/ml and approximately 10 mg/ml in DMSO and DMF.

CAY10564 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, CAY10564 should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. CAY10564 has a solubility of approximately 0.25 mg/ml in a 1:5 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

S-Nitrosothiols (RSNOs) are a class of molecules that function as exogenous and endogenous nitric oxide (NO) donors. RSNOs found *in vivo* include proteins such as S-nitrosohemoglobin and S-nitrosoalbumin, as well as low molecular weight species such as S-nitrosoglutathione (GSNO) and S-nitrosocysteine (CysNO). CAY10564 is a member of a new class of S-nitrosothiol species that act as NO donors under acidic conditions. It decomposes with a half-life of 15 minutes in 0.1 M phosphate buffer, pH 5.0, at 37°C and relaxes phenylephrine-constricted rat aortic strips 63% and 37% at pH 6.0 and 7.4, respectively.[1]

References

1. Lu, D., Nadas, J., Zhang, G., *et al.* 4-Aryl-1,3,2-oxathiazolylium-5-olates as pH-controlled NO-donors: The next generation of S-nitrosothiols. *Journal of American Chemical Society* **129**, 5503-5514 (2007).

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