

Product Data Sheet

Product Name: MCLA hydrochloride

Cat. No.: GC30538

Chemical Properties

Cas. No. 128322-44-1

SMILES CC1=NC2=CNC(C3=CC=C(OC)C=C3)=CN2C1=O.Cl

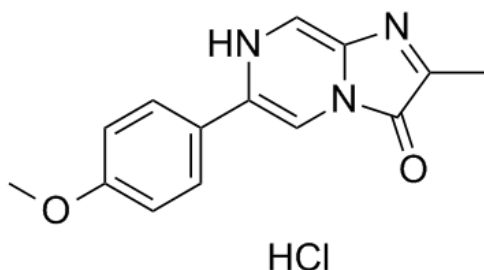
Formula $C_{14}H_{14}ClN_3O_2$ M.Wt 291.73

Solubility DMF: 10 mg/ml, DMSO: 5 mg/ml, Ethanol: 2 mg/ml, PBS (pH 7.2): 5 mg/ml
Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Protocol

Caution: Product has not been fully validated for medical applications. For research use only.

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**Kinase
experiment:**

The standard reaction mixture contains 1×10^{-7} M MCLA hydrochloride (MCLA), 5×10^{-5} M hypoxanthine, XOD (6.5 U), SOD (0.2 to 20 ng/mL) or none, and 50 mM Tris-HCl buffer containing 0.1 mM EDTA at pH 7.8, in a total volume of 3.0 mL. Chemiluminescence measurement is initiated by the addition of MCLA hydrochloride to the standard incubation mixture excluding XOD, continued for 4 min without additive and for an additional 4 min after the addition of XOD. Chemiluminescence is measured using a luminescence reader at 25°C[1].

References:

[1]. Kimura H, et al. Highly sensitive and reliable chemiluminescence method for the assay of superoxide dismutase in human erythrocytes. FEBS Lett. 1988 Nov 7;239(2):347-50.

Background

MCLA hydrochloride is a chemiluminescent reagent which can be used to quantify aqueous concentrations of superoxide.

The non-specific luminescence remains almost constant for 10 min after the addition of MCLA hydrochloride (MCLA) and is not significantly influenced by SOD. The MCLA hydrochloride method is, however, 4.5-times more sensitive than the CLA method[1].

[1]. Kimura H, et al. Highly sensitive and reliable chemiluminescence method for the assay of superoxide dismutase in human erythrocytes. FEBS Lett. 1988 Nov 7;239(2):347-50.

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