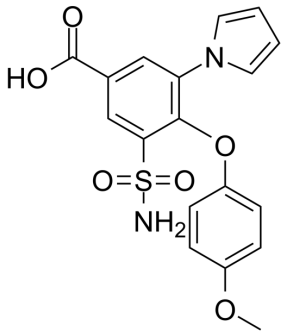
H100

Cat. No.:	HY-100322
CAS No.:	643727-55-3
Molecular Formula:	$C_{18}H_{16}N_2O_6S$
Molecular Weight:	388.39
Target:	Chloride Channel
Pathway:	Membrane Transporter/Ion Channel
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	H100 is a Cl^- transport inhibitor, with partial effects against both the NaK2Cl cotransporter and the Band 3 anion exchanger, but no effect against KCl cotransporter, in human erythrocytes.
IC_{50} & Target	Cl^- transport[1]
In Vitro	H100 is a Cl^- transport inhibitor, with partial effects against both the NaK2Cl cotransporter (NKCC) and the Band 3 anion exchanger (AE), but no effect against KCl cotransporter (KCC), in human erythrocytes. H100 (0.1 mM) shows 63% and 74% inhibition of NKCC and AE in human erythrocytes[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Cell Assay [1]	$^{35}SO_4^{2-}$ efflux is used as a convenient measure of the activity of the Band 3 anion exchanger (AE). Erythrocytes are suspended into MBS containing Na_2SO_4 rather than NaCl and incubated at 37°C for 30 min. The cell suspension is then centrifuged (3,000 g, 5 min) and the supernatant removed. The above procedure is repeated twice to ensure the intracellular replacement of Cl^- with SO_4^{2-}. To load the erythrocytes with radiolabel, the packed cells are re-suspended to approximately 50% haematocrit in a solution containing 1 part SO_4^{2-} MBS and 9 parts of a medium containing (in mM) 300 sucrose and 10 MOPS (pH 7.4, 300 ± 5 mOsm) and placed in a microcentrifuge tube. 10 µCi of $^{35}SO_4^{2-}$ is then added and the suspension incubated at 37°C for 1 h. At the end of this period, the cells are then washed four times by centrifugation (10,000 g, 10 s) in ice-cold SO_4^{2-} MBS. All inhibitors (H100) are dissolved in either DMSO or MBS and are added to the cell suspensions prior to the addition of the radioisotope[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Culliford S1, et al. Specificity of classical and putative Cl(-) transport inhibitors on membrane transport pathways in human erythrocytes. Cell Physiol Biochem. 2003;13(4):181-8.

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

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