

Product Data Sheet

Product Name: Hygromycin B (hydrate)

Cat. No.: GC48445

Chemical Properties

Cas. No.

SMILES O[C@H]1[C@@H](CO)O[C@@H](O[C@@]2([H])[C@H](O)[C@@H](NC)C[C@@H](N)[C@@H]2O)[C@]3([H])[C@@]1([H])OC4(O[C@@]([C@@H](N)CO)([H])[C@H](O)[C@H](O)[C@H]4O)O3.O

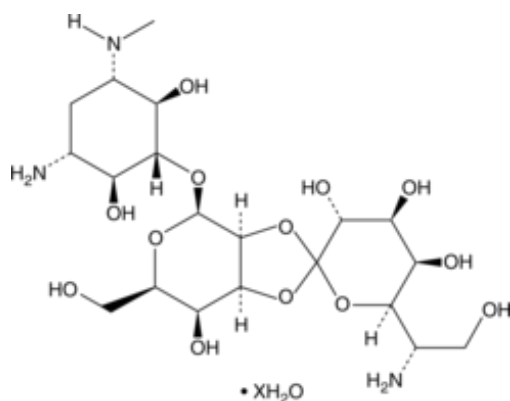
Formula C₂₀H₃₇N₃O₁₃•XH₂O M.Wt 527.5

Solubility DMSO: 3.3 mg/ml, PBS (pH 7.2): 3.3 mg/ml Storage -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



Background

Hygromycin B is an antibiotic which is used in molecular and cell biology to select for transformed cells expressing the hygromycin resistance gene.^{1,2} It is an aminoglycoside produced by the bacterium *S. hygrosopicus* which kills prokaryotic and eukaryotic cells by inhibiting protein synthesis.^{3,4} The hygromycin resistance gene (*hyg* or *hph*) encodes a phosphotransferase which inhibits hygromycin through phosphorylation.²

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

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1.Kaster, K.R., Burgett, S.G., Rao, R.N., et al. Analysis of a bacterial hygromycin B resistance gene by transcriptional and translational fusions and by DNA sequencing *Nucleic Acids Research* 11(19)6895-6911(1983) 2.Blochlinger, K., and Diggelmann, H. Hygromycin B phosphotransferase as a selectable marker for DNA transfer experiments with higher eucaryotic cells *Molecular and Cellular Biology* 4(12)2929-2931(1984) 3.Eustice, D.C., and Wilhelm, J.M. Mechanisms of action of aminoglycoside antibiotics in eucaryotic protein synthesis *Antimicrobial Agents and Chemotherapy* 26(1)53-60(1984) 4.Cabañas, M.J., Vázquez, D., and Modolell, J. Dual interference of hygromycin B with ribosomal translocation and with aminoacyl-tRNA recognition *European Journal of Biochemistry* 87 21-27(1978)

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