

PRODUCT INFORMATION

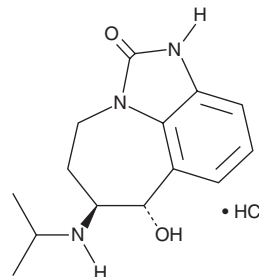


Zilpaterol (hydrochloride)

Item No. 16484

CAS Registry No.: 119520-06-8
Formal Name: (6R,7R)-rel-4,5,6,7-tetrahydro-7-hydroxy-6-[(1-methylethyl)amino]-imidazo[4,5,1-jk][1]benzazepin-2(1H)-one, monohydrochloride

Synonym: RU-42173
MF: C₁₄H₁₉N₃O₂ • HCl
FW: 297.8
Purity: ≥95%
UV/Vis.: λ_{max}: 210, 234, 287 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Zilpaterol (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the zilpaterol (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Zilpaterol (hydrochloride) is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of zilpaterol (hydrochloride) in these solvents is approximately 1 and 0.1 mg/ml, respectively.

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. Organic solvent-free aqueous solutions of zilpaterol (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of zilpaterol (hydrochloride) in PBS (pH 7.2) is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Zilpaterol is a β-adrenergic receptor agonist that putatively through activation of protein kinase A increases protein synthesis in skeletal muscle fibers, as well as reduces lipogenesis and increases lipolysis in adipose tissues.^{1,2} It was approved by the FDA in 2006 as a veterinary food additive for the purpose of increasing lean body weight and improving feed efficiency in commercial beef cattle.³

References

1. Avendaño-Reyes, L., Torres-Rodríguez, V., Meraz-Murullo, F.J., *et al.* Effects of two β-adrenergic agonists on finishing performance, carcass characteristics, and meat quality of feedlot steers. *J. Anim. Sci.* **84**(12), 3259-3265 (2006).
2. Miller, E.K., Chung, K.Y., Hutcheson, J.P., *et al.* Zilpaterol hydrochloride alters abundance of β-adrenergic receptors in bovine muscle cells but has little effect on de novo fatty acid biosynthesis in bovine subcutaneous adipose tissue explants. *J. Anim. Sci.* **90**(4), 1317-1327 (2012).
3. Delmore, R.J., Hodgen, J.M., and Johnson, B.J. Perspectives on the application of zilpaterol hydrochloride in the United States beef industry. *J. Anim. Sci.* **88**(8), 2825-2828 (2010).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/05/2022

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD

ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897

[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM

WWW.CAYMANCHEM.COM