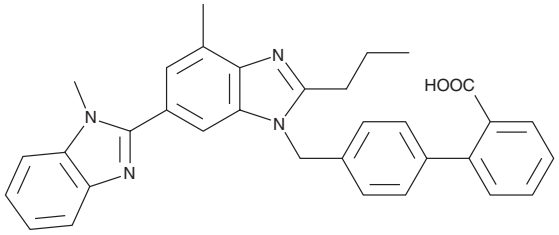
PRODUCT INFORMATION

Telmisartan

Item No. 11615

CAS Registry No.: 144701-48-4
Formal Name: 4'-[(1,4'-dimethyl-2'-propyl[2,6'-bi-1H-benzimidazol]-1'-yl)methyl]-[1,1'-biphenyl]-2-carboxylic acid
Synonyms: BIBR 277, Micardis, Pritor
MF: $C_{33}H_{30}N_4O_2$
FW: 514.6
Purity: ≥98%
UV/Vis.: λ_{max}: 225, 297 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

Telmisartan is supplied as a crystalline solid. A stock solution may be made by dissolving the telmisartan in the solvent of choice, which should be purged with an inert gas. Telmisartan is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of telmisartan in DMSO is approximately 1 mg/ml and approximately 1.6 mg/ml in DMF.

Telmisartan is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, telmisartan should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Telmisartan has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Angiotensin II is a peptide hormone which regulates blood pressure and fluid balance, contributing to hypertension, atherosclerosis, left ventricular hypertrophy, myocardial infarction, and heart failure.[1] Telmisartan is a nonpeptide angiotensin II receptor antagonist which selectively and insurmountably inhibits the angiotensin II AT1 receptor subtype (K_i = 3.7 nM).[2] It also acts as a partial agonist of PPARγ, activating the receptor to 25-30% of that produced by the full agonist rosiglitazone (EC_{50} = 4.5 µM).[3] Through these actions, telmisartan potently reduces blood pressure in various animal models of hypertension, diminishing cardiac hypertrophy, cardiovascular and renal risk, and glomerulosclerosis.[4-6]

References

1. Frampton, J.E. *Drugs* **71(6)**, 651-677 (2011).
2. Wienen, W., Hauel, N., Van Meel, J.C.A., *et al. Br. J. Pharmacol.* **110(1)**, 245-252 (1993).
3. Benson, S.C., Pershadsingh, H.A., Ho, C.I., *et al. Hypertension* **43(5)**, 993-1002 (2004).
4. McClellan, K.J. and Markham, A. *Drugs* **56(6)**, 1039-1044 (1998).
5. Jugdutt, B.I. *Clin. Interv. Aging* **5**, 403-416 (2010).
6. Schmieder, R.E., Bakris, G., and Weir, M.R. *J. Nephrol.* **24(3)**, 263-273 (2011).

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, 11/17/2022

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