

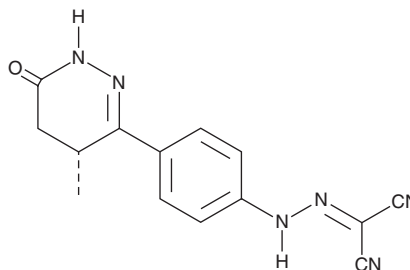
PRODUCT INFORMATION



Levosimendan

Item No. 16128

CAS Registry No.: 141505-33-1
Formal Name: 2-[2-[4-[(4R)-1,4,5,6-tetrahydro-4-methyl-6-oxo-3-pyridazinyl]phenyl]hydrazinylidene]-propanedinitrile
Synonyms: OR 1259, (R)-Simendan
MF: C₁₄H₁₂N₆O
FW: 280.3
Purity: ≥98%
UV/Vis.: λ_{max}: 290, 382 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

Levosimendan is supplied as a crystalline solid. A stock solution may be made by dissolving the levosimendan in the solvent of choice, which should be purged with an inert gas. Levosimendan is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of levosimendan in these solvents is approximately 10, 25, and 30 mg/ml, respectively.

Description

Levosimendan is a calcium sensitizer that can cause increased cardiac contractility by binding troponin C (EC₅₀ = 9 nM), promotes vasodilation by activating ATP-sensitive potassium channels on vascular smooth muscle cells (EC₅₀ = 0.28 μM), and performs a cardioprotective function by prompting the opening of mitochondrial potassium channels in cardiomyocytes.^{1,2} It also has been reported to inhibit phosphodiesterases 3 and 4 in left ventricular cardiac tissue with IC₅₀ values of 2.5 nM and 25 μM, respectively.³

References

1. Nieminen, M.S., Fruhwald, S., Heunks, L.M.A., *et al.* Levosimendan: Current data, clinical use and future development. *Heart Lung Vessel* **5**(4), 227-245 (2013).
2. Papp, Z., Csapó, K., Pollesello, P., *et al.* Pharmacological mechanisms contributing to the clinical efficacy of levosimendan. *Cardiovasc. Drug Rev.* **23**(1), 71-98 (2005).
3. Szilágyi, S., Pollesello, P., Levijoki, J., *et al.* The effects of levosimendan and OR-1896 on isolated hearts, myocyte-sized preparations and phosphodiesterase enzymes of the guinea pig. *Eur. J. Pharmacol.* **486**(1), 67-74 (2004).

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.

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