**PRODUCT INFORMATION**

**Levosimendan**

*Item No. 16128*

**CAS Registry No.:** 141505-33-1  
**Formal Name:** 2-[4-[4-[(4R)-1,4,5,6-tetrahydro-4-methyl-6-oxo-3-pyridazinyl]phenyl]hydrazinylidene]propanedinitrile  
**Synonyms:** OR 1259, (R)-Simendan  
**MF:** C_{14}H_{12}N_{6}O  
**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.*

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**Laboratory Procedures**

Levosimendan is supplied as a crystalline solid. A stock solution may be made by dissolving the levsimendan 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 (EC_{50} = 9 nM), promotes vasodilatation by activating ATP-sensitive potassium channels on vascular smooth muscle cells (EC_{50} = 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 IC_{50} values of 2.5 nM and 25 µM, respectively.\(^3\)

**References**