Product Specification Sheet

Product Name: TMC114 (Darunavir)
Catalog Number: C8114

Technical information:

- **Chemical Formula:** C_{27}H_{37}N_{3}O_{7}S.C_{2}H_{5}OH
- **CAS #:** 635728-49-3
- **Molecular Weight:** 593.73
- **Purity:** > 98%
- **Appearance:** White solid
- **Solubility:** Soluble in DMSO up to 100 mM
- **Chemical Name:** N-[(1S,2R)-3-[[4-Aminophenyl]sulfonfyl][2-methylpropyl]amino]-2-hydroxy-1-(phenylmethyl)propyl]carbamic acid (3R,3aS,6aR)-hexahydrofuro[2,3-b]furan-3-yl ester compd. with ethanol
- **Storage:** Store solid powder at 4°C desiccated; Store DMSO solution at -20°C.
- **Shelf Life:** In the unopened package, powder is stable for 1 year and DMSO solution is stable for 6 months under proper storage condition.

Handling:
- To make 10 mM stock solution, add 0.168mL of DMSO for each mg of TMC114 (Darunavir).
- For DMSO solution, briefly spin the vial at 500 rpm in a 50 mL conical tube to ensure maximum sample recovery.

Biological Activity:
Darunavir Ethanolate (TMC114), a phenylalanine mimic, is a potent inhibitor of HIV-1 protease with EC50 activity against the wild type IIIB strain of 4 nM and an average EC50 activity against mutant protease inhibitor strains M1-M5 of 5 nM. [1] Furthermore, of 150 protease inhibitor-resistant viruses tested, 75% were inhibited by darunavir with an EC50 of <10 nM. [2]

Darunavir exhibits no cytotoxicity at concentrations up to 100 uM and has been shown to be synergistic with a variety of other protease inhibitors and reverse transcriptase inhibitors. [3]

Reference:

For Technical Support: [technical@cellagentech.com](mailto:technical@cellagentech.com)

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