### Product Specification Sheet

**Product Name:** ABT-378 (Lopinavir)  
**Catalog Number:** C2378

#### Technical information:
- **Chemical Formula:** C_{37}H_{48}N_{4}O_{5}
- **CAS #:** 192725-17-0
- **Molecular Weight:** 628.8
- **Purity:** > 98%
- **Appearance:** White solid
- **Solubility:** Soluble in DMSO up to 100 mM
- **Chemical Name:** (S)-N-[(2S,4S,5S)-5-{[2,6-dimethyl(phenoxo)acetamido]-4-hydroxy-1,6-diphenylhexan-2-y1}-3-methyl-2-[2-oxo-tetrahydroprymidin-1(2H)-yl]butanamide
- **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 0.159mL of DMSO for each mg of ABT-378 (Lopinavir).
- For DMSO solution, briefly spin the vial at 500 rpm in a 50 mL conical tube to ensure maximum sample recovery.

#### Biological Activity:
Lopinavir (ABT-378), designed in response to Val82 mutant strains of HIV [1], is a potent inhibitor of HIV protease with Ki of 1.3-3.6 pM. Lopinavir inhibits replication of HIV-1 with an EC50 of 6-17 nM. [2]

Ritonavir was found to inhibit the metabolism of lopinavir with no other antagonistic effects; therefore lopinavir’s drug exposure can be enhanced by co-formulation with ritonavir. In the presence of 50% human serum, the mean EC50 of lopinavir for five laboratory HIV-1 isolates ranged from 65 to 289 nM. [3]

#### Reference:

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

*Chemicals are sold for research use only, not for clinical or diagnostic use.*