## Product Specification Sheet

**Product Name:** Cl-1011 (Avasimibe)  
**Catalog Number:** C2410

### Technical information:
- **Chemical Formula:** C<sub>29</sub>H<sub>42</sub>NO<sub>5</sub>S
- **CAS #:** 166518-60-1  
- **Molecular Weight:** 501.72  
- **Purity:** > 98%  
- **Appearance:** White solid  
- **Solubility:** Soluble in DMSO up to 100 mM  
- **Chemical Name:** 2,6-diisoproplyphenyl 2-(2,4,6-trisoproplyphenyl)acetylsulfamate  
- **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 0.199mL of DMSO for each mg of Cl-1011 (Avasimibe)  
- For DMSO solution, briefly spin the vial at 500 rpm in a 50 mL conical tube to ensure maximum sample recovery.

### Biological Activity:
Cl-1011 (Avasimibe) is an orally-available acylsulfamic acid inhibitor of Acyl Coenzyme A cholesterol acyltransferase (ACAT), an enzyme that catalyzes the esterification of cholesterol. inhibition of ACAT by Cl-1011 presumably operates by modulating apoB synthesis and secretion, thereby lowering plasma concentration of apoB-containing lipoproteins. [3] Cl-1011 inhibits ACAT at 3.3 uM, though it has been shown to be more potent dependent on microsome concentration. [1] Cl-1011 also inhibits CYP450 enzymes 2C9, 1A2, and 2C19 at 2.9 uM, 13.9 uM, and 26.5 uM, respectively. [2] Cl-1011 has been shown to be a PXR activator and has CYP3A4 induction profile approximately 10 fold more potent than rifampin. [2]

Cl-1011 reduces plasma triglyceride levels in chow-fed rats, cholesterol-fed rats, sucrose-fed rats, and hamsters. [1] In addition to inhibiting lipid accumulation in macrophages, and thus reducing atherosclerotic lesion occurrence, Cl-1011 also has plaque-stabilizing properties by inhibiting MMP expression and activity.

### Reference:
2. Sahi et al., Effects of avasimibe on cytochrome P450 2C9 expression in vitro and in vivo. Drug Metabolism and Disposition, 2004, 32(12), 1370-1376. Pubmed ID: 15333513  
3. Burnett et al., Inhibition of ACAT by avasimibe decreases both VLDL and LDL apolipoprotein B production in miniature pigs. J. Lipid Res. 1999. 40. 1317-1327. Pubmed ID: 10393217

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