Product Specification Sheet

Product Name: IWP-3

Catalog Number: C4971-2 (powder)

C4971-2s (10mM in DMSO)

Package Size: 2 mg

Technical information:

Chemical Formula: C₂₂H₁₇FN₄O₂S₃

CAS #: 687561-60-0

Molecular Weight: 484.59

Purity: >98%

Formulation: Light yellow solid

Solubility: Soluble in DMSO up to 100 mM

Chemical Name: 2-(3-(4-fluorophenyl)-3,4,6,7-tetrahydro-4-oxothieno[3,2-d]pyrimidin-2-

ylthio)-N-(6-methylbenzo[d]thiazol-2-yl)acetamide

Storage: Store solid powder at 4°C desiccated;

Store DMSO solution at -20°C.

Handling: • For C4971-2 (powder), add 413 uL of DMSO to make 10 mM solution.

• For C4971-2s, before open the vial, centrifuge the vial at 500rpm x 1 min

in a 50 mL conical tube to ensure full recovery of sample.

Biological Activity: IWP-3 is a selective small molecule wnt inhibitor, prevents palmitylation of

Wnt proteins by Porcupine (Porcn), a membrane-bound O-acyltransferase, thereby blocking Wnt secretion and activity1. It blocks phosphorylation of the Lrp6 receptor and accumulation of both Dvl2 and β -catenin. It has an IC50 of 40 nM which is 100 folds less potent than Wnt-C59, but it can still

efficiently promote cardiomyocyte differentiation from human ESCs.

Reference: 1. Baozhi Chen, et al. Small molecule-mediated disruption of Wnt-dependent signaling in tissue regeneration and cancer. Nature

Chemical Biology (2009); 5(2), 100-107.

2. Willems E, et al. Small-Molecule Inhibitors of the Wnt Pathway Potently

Promote Cardiomyocytes From Human Embryonic Stem Cell-Derived

Mesoderm. Circ Res. 2011

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