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1. Description

Components StemMACS™ IWP-4.

Size 2 mg

Product format White solid

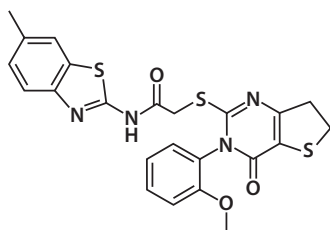
Molecular weight 496.62

CAS number 686772-17-8

Systematic name 2-(3,4,6,7-Tetrahydro-3-(2-methoxyphenyl)-4-oxothieno[3,2-*d*]pyrimidin-2-ylthio)-*N*-(6-methylbenzo[*d*]thiazol-2-yl)acetamide

Molecular formula C₂₃H₂₀N₄O₃S₃

Structure



Purity >95%

Solubility Soluble in DMSO (up to 4 mM).

Storage Store powder at -20 °C. After reconstitution, store aliquots at -20 °C. Protect from light.

1.1 Background information

StemMACS™ IWP-4 inactivates the membrane-bound O-acyltransferase Porcupine (Porcn) which mediates palmitylation of Wnt proteins. Inhibition of Porcn prevents Wnt secretion and thus blocks activation of the Wnt signaling pathway. Consistent with the missing Wnt ligand, levels of phosphorylated Lrp6 and Dvl2 are decreased in the presence of IWP-4 and β-catenin cannot accumulate.

2. Protocol

2.1 Preparation of stock solution

Effective concentrations of StemMACS IWP-4 for cell culture applications range from 1 μM to 10 μM. A 2 mM stock solution in DMSO will be appropriate for most applications and can be prepared as follows:

1. Reconstitute the entire vial contents by adding 2014 μL of pure DMSO. Warm to 37 °C for 3–5 minutes to facilitate solubilization.

▲ **Note:** The vial may have turned upside down during transportation. Gently tap prior to reconstitution to collect all powder at the bottom of the vial.

2. Prepare appropriate aliquots and store at -20 °C. Avoid repeated freeze-thaw cycles.

▲ **Note:** The DMSO concentration in culture should not exceed 0.5 %. Stock solutions of alternate concentration can be prepared using the following table. Add the solvent directly to the vial, it will hold up to 4 mL.

| Desired stock | 1 mM | 2 mM | 2.5 mM |
|-----------------------|---------|---------|---------|
| Volume of DMSO to add | 4027 μL | 2014 μL | 1610 μL |

2.2 Use in cell culture

1. Thaw aliquots at 37 °C as needed.
2. To avoid precipitation, prewarm the cell culture media prior to adding the reconstituted compound.
3. Mix and filter the supplemented media through a 0.2 μm low-protein binding filter.

Refer to www.miltenyibiotec.com for all data sheets and protocols. Miltenyi Biotec provides technical support worldwide. Visit www.miltenyibiotec.com/local to find your nearest Miltenyi Biotec contact.

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