# **PRODUCT** INFORMATION



## IWR-1-exo

Item No. 13598

| CAS Registry No.:<br>Formal Name:   | 1127442-87-8<br>4-[(3aR,4S,7R,7aS)-1,3,3a,4,7,7a-<br>hexahydro-1,3-dioxo-4,7-<br>methano-2H-isoindol-2-yl]-N-8-<br>quinolinyl-benzamide |      |
|---|---|------|
| MF:   | C <sub>25</sub> H <sub>19</sub> N <sub>3</sub> O <sub>3</sub>   |      |
| FW:   | 409.4   | н ю  |
| Purity:   | ≥98%  | н    |
| UV/Vis.:  | λ <sub>max</sub> : 202, 241, 320 nm   | NÍ / |
| Supplied as:  | A crystalline solid   |      |
| Storage:  | -20°C   |      |
| Stability:  | ≥4 years  |      |
| Information represents the product encodifications. Databasecific analytical results are presided on each contificate of analysis |   |      |

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

#### Laboratory Procedures

IWR-1-exo is supplied as a crystalline solid. A stock solution may be made by dissolving the IWR-1-exo in the solvent of choice, which should be purged with an inert gas. IWR-1-exo is soluble in organic solvents such as chloroform, DMSO, and dimethyl formamide (DMF). The solubility of IWR-1-exo in these solvents is approximately 1, 0.3, and 5 mg/ml, respectively.

IWR-1-exo is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, IWR-1-exo should first be dissolved in DMF and then diluted with the aqueous buffer of choice. IWR-1-exo has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

#### Description

Wnt signaling proteins are small secreted proteins that are active in embryonic development, tissue homeostasis,<sup>1</sup> and tumorigenesis.<sup>2,3</sup> Wht proteins bind to receptors on the cell surface, initiating a signaling cascade that leads to  $\beta$ -catenin activation of gene transcription. IWR-1-exo is a diastereomer of IWR-1-endo, the potent inhibitor of the Wnt response.<sup>4</sup> Whereas IWR-1-endo strongly blocks cell-based Wnt/β-catenin pathway reporter response ( $IC_{50} = 180 \text{ nM}$ )<sup>4</sup> and suppresses Wnt-dependent zebrafish tail fin regeneration  $(0.5 \,\mu\text{M})$ ,<sup>5</sup> IWR-1-exo has little effect in either assay at 10  $\mu$ M.<sup>4</sup> Thus, this compound is an ideal control for tests involving the active form, IWR-1-endo.

#### References

- 1. Clevers, H. Wnt/β-catenin signaling in development and disease. Cell 127(3), 469-480 (2006).
- 2. Polakis, P. Wnt signaling and cancer. Genes Dev. 14(15), 1837-1851 (2000).
- 3. Reya, T. and Clevers, H. Wnt signalling in stem cells and cancer. Nature 434(7035), 834-850 (2005).
- 4. Chen, B., Dodge, M.E., Tang, W., et al. Small molecule-mediated disruption of Wnt-dependent signaling in tissue regeneration and cancer. Nature Chemical Biology 5(2), 100-107 (2009).
- 5. Lu, J., Ma, Z., Hsieh, J.-C., et al. Structure-activity relationship studies of small-molecule inhibitors of Wnt response. Bioorg. Med. Chem. Lett. 19(14), 3825-3827 (2009).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFFTY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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