

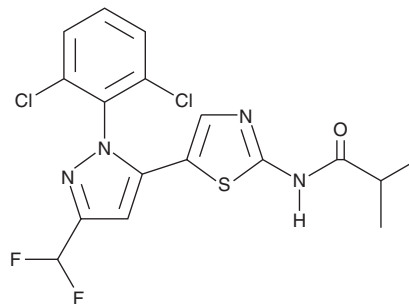
# PRODUCT INFORMATION



## BMS-5

Item No. 21072

**CAS Registry No.:** 1338247-35-0  
**Formal Name:** N-[5-[1-(2,6-dichlorophenyl)-3-(difluoromethyl)-1H-pyrazol-5-yl]-2-thiazolyl]-2-methyl-propanamide  
**Synonyms:** LIM Kinase Inhibitor I, LIMKi 3  
**MF:** C<sub>17</sub>H<sub>14</sub>Cl<sub>2</sub>F<sub>2</sub>N<sub>4</sub>OS  
**FW:** 431.3  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 297 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

BMS-5 is supplied as a crystalline solid. A stock solution may be made by dissolving the BMS-5 in the solvent of choice, which should be purged with an inert gas. BMS-5 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of BMS-5 in these solvents is approximately 1, 25, and 15 mg/ml, respectively.

BMS-5 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, BMS-5 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. BMS-5 has a solubility of approximately 0.2 mg/ml in a 1:5 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

BMS-5 is a potent inhibitor of activated LIM domain kinases LIMK1 and LIMK2 with IC<sub>50</sub> values of 7 and 8 nM, respectively.<sup>1</sup> LIMK1 and LIMK2 participate in signal pathways affecting actin dynamics by deactivating cofilin.<sup>2,3</sup> This compound can be used to study the role of activated LIMK isoforms in the signaling of Rho family GTPases to cytoskeletal proteins, including cofilin.

### References

1. Ross-Macdonald, P., de Silva, H., Guo, Q., *et al.* Identification of a nonkinase target mediating cytotoxicity of novel kinase inhibitors. *Mol. Cancer Ther.* **7(11)**, 3490-3498 (2008).
2. Li, X., Zhu, Y., Cao, Y., *et al.* LIM kinase activity is required for microtubule organising centre positioning in mouse oocyte meiosis. *Reprod. Fertil. Dev.* **29(4)**, 791-804 (2016).
3. Romarowski, A., Battistone, M.A., La Spina, F.A., *et al.* PKA-dependent phosphorylation of LIMK1 and cofilin is essential for mouse sperm acrosomal exocytosis. *Dev. Biol.* **405(2)**, 237-249 (2015).

#### WARNING

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

#### SAFETY 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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