

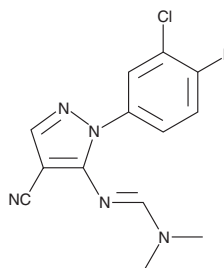
# PRODUCT INFORMATION



## Binucleine 2

Item No. 23367

**CAS Registry No.:** 220088-42-6  
**Formal Name:** N'-[1-(3-chloro-4-fluorophenyl)-4-cyano-1H-pyrazol-5-yl]-N,N-dimethyl-methanimidamide  
**MF:** C<sub>13</sub>H<sub>11</sub>ClFN<sub>5</sub>  
**FW:** 291.7  
**Purity:** ≥98%  
**Supplied as:** A 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

Binucleine 2 is supplied as a solid. A stock solution may be made by dissolving the binucleine 2 in the solvent of choice, which should be purged with an inert gas. Binucleine 2 is slightly soluble in chloroform and DMSO.

### Description

Binucleine 2 is an isoform-specific and ATP-competitive inhibitor of *Drosophila* Aurora B kinase ( $K_i = 0.36 \mu\text{M}$ ), a kinase involved in cell division.<sup>1</sup> It is specific for *Drosophila* Aurora B kinase, inhibiting it in a dose-dependent manner, with minimal inhibition of human or *X. laevis* Aurora B kinases at concentrations up to 100  $\mu\text{M}$ . Binucleine 2 induces mitotic and cytokinesis defects in *Drosophila* Kc<sub>167</sub> cells. It prevents *Drosophila* S2 cells from assembling a contractile ring during cell division when used at a concentration of 40  $\mu\text{M}$  but does not affect ring ingression, suggesting that Aurora B kinase activity is not required for that step.

### Reference

1. Smurnyy, Y., Toms, A.V., Hickson, G.R., *et al.* Binucleine 2, an isoform-specific inhibitor of *Drosophila* Aurora B kinase, provides insights into the mechanism of cytokinesis. *ACS Chem Biol.* **5(11)**, 1015-1020 (2010).

#### 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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