

<b>#10451</b> Store at -20C	Importazole	
	5 mg	<b>Orders:</b> 877-616-CELL (2355) <a href="mailto:orders@cellsignal.com">orders@cellsignal.com</a>  <b>Support:</b> 877-678-TECH (8324)  <b>Web:</b> <a href="mailto:info@cellsignal.com">info@cellsignal.com</a> <a href="http://cellsignal.com">cellsignal.com</a>
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### Background

Importazole is a cell-permeable, specific inhibitor of importin- $\beta$ -mediated nuclear import (1). Nuclear import through importin  $\beta$ 1 association with adaptor importin  $\alpha$  is an essential component of the classical nuclear localization signal (NLS) pathway. Following recognition of the cargo target NLS by importin  $\alpha$ , the cargo:importin  $\alpha$ :importin  $\beta$ 1 complex is transported across the nuclear pore complex into the nucleus, where it dissociates by binding the small, GTP-bound GTPase Ran (2). Importazole blocks importin- $\beta$ -mediated nuclear import by specifically inhibiting importin- $\beta$  function, likely through altering the interaction between RanGTP and importin- $\beta$  (1). Inhibition of the RanGTP/importin- $\beta$  pathway by Importazole in mitotic cells results in multiple mitotic defects, including defects in spindle assembly, chromosome congression, and spindle centering (3). Similar results were seen in mouse oocytes, where Importazole treatment blocks meiosis I (MI) spindle formation and function (4).

### Molecular Formula

C<sub>20</sub>H<sub>22</sub>N<sub>4</sub>

### Molecular Weight

318.4 g/mol

### Purity

>97%

### CAS

662163-81-7

### Solubility

Soluble in DMSO at 30 mg/mL.

### Storage

Store lyophilized at room temperature, desiccated. In lyophilized form, the chemical is stable for 24 months. Once in solution, store at -20°C and use within 3 months to prevent loss of potency. *Aliquot to avoid multiple freeze/thaw cycles.*

### Directions for Use:

Importazole is supplied as a lyophilized powder. For a 15 mM stock, reconstitute 5 mg of powder in 1.05 mL of DMSO. Working concentrations and length of treatment can vary depending on the desired effect.

### Background References

- Soderholm, J.F. et al. (2011) *ACS Chem Biol* 6, 700-8.
- Lange, A. et al. (2007) *J Biol Chem* 282, 5101-5.
- Bird, S.L. et al. (2013) *Mol Biol Cell* 24, 2506-14.
- Drutovic, D. et al. (2020) *EMBO J* 39, e101689.

### Cross-Reactivity Key

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster  
**X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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