**Dasatinib**

☑️ 5 mg

## Background
Dasatinib is a small molecule inhibitor of both the Src and Bcr-Abl tyrosine kinases, with IC\textsubscript{50} values of 0.55 and 3.0 nM for the isolated kinases, respectively (1). Imatinib and dasatinib have similar inhibitory mechanisms, but dasatinib displays greater potency in imatinib-resistant cell lines and greater inhibitory effect on platelet derived growth factor (PDGF) (2,3).

### Molecular Formula
C\textsubscript{22}H\textsubscript{26}ClN\textsubscript{7}O\textsubscript{2}S

### Molecular Weight
488.01 g/mol

### Solubility
Soluble in DMSO at 200 mg/mL; very poorly soluble in ethanol and water with maximum solubility in water estimated to be about 10 μM.

### Purity
>99%.

### Directions for Use
Dasatinib is supplied as a lyophilized powder. For a 5 mM stock, reconstitute the 5 mg in 2.05 mL DMSO. Working concentrations and length of treatments vary depending on the desired effect, but it is typically used at 50-500 nM for 2-6 hours.

### Storage
Store lyophilized or in solution at -20°C, desiccated. Protect from light. In lyophilized form, the chemical is stable for 24 months. Once in solution, use within 3 months to prevent loss of potency. Aliquot to avoid multiple freeze/thaw cycles.

### Background References

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Western blot analysis of extracts from LNCaP cells, untreated (-) or treated with dasatinib (100 nM; 2 h; +), using Phospho-Src Family (Tyr416) Antibody #2101 (upper) and Src (36D10) Rabbit mAb #2109 (lower).