

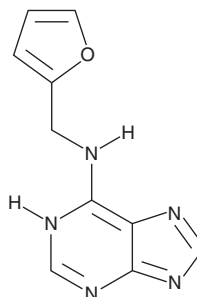
# PRODUCT INFORMATION



## Kinetin

Item No. 20712

**CAS Registry No.:** 525-79-1  
**Formal Name:** N-(2-furanylmethyl)-9H-purin-6-amine  
**Synonyms:** N<sup>6</sup>-furfuryladenine, NSC 23119  
**MF:** C<sub>10</sub>H<sub>9</sub>N<sub>5</sub>O  
**FW:** 215.2  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 210, 268 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

Kinetin is supplied as a crystalline solid. A stock solution may be made by dissolving the kinetin in the solvent of choice. Kinetin is soluble in the organic solvent DMSO, which should be purged with an inert gas, at a concentration of approximately 0.33 mg/ml.

### Description

Kinetin is a cytokinin and plant growth regulator.<sup>1,2</sup> It increases the percentage of tetraploid cells in mitosis in mature *P. sativum* root segments when used at a concentration of 3.2 μM.<sup>1</sup> Kinetin (2 mg/L) decreases *P. maritimum* seed germination, leaf number, leaf length, and root length.<sup>2</sup> It increases GSH levels, decreases glutathione peroxidase (GPX) activity, and reduces thiobarbituric acid reactive substances (TBARS) levels in human skin fibroblasts when used at a concentration of 10 μM.<sup>3</sup> Kinetin also inhibits the replication of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in infected Calu-3 and Huh7 cells in a concentration-dependent manner.<sup>4</sup> Formulations containing kinetin have been used as plant growth regulators in agriculture.

### References

1. Torry, J.G. Kinetin as trigger for mitosis in mature endomitotic plant cells. *Exp. Cell Res.* **23**, 281-299 (1961).
2. Redhwan, A., Acemi, A., and Özen, F. Effects of plant growth regulators on in vitro seed germination, organ development and callogenesis in *Pancreaticum maritimum* L. *Plant Cell Tiss. Org.* **154**, 97-110 (2023).
3. Jabłońska-Trypuć, A., Matejczyk, M., and Czerpak, R. N<sup>6</sup>-benzyladenine and kinetin influence antioxidative stress parameters in human skin fibroblasts. *Mol. Cell Biochem.* **413(1-2)**, 97-107 (2016).
4. Souza, T.M.L., Pinho, V.D., Setim, C.F., et al. Preclinical development of kinetin as a safe error-prone SARS-CoV-2 antiviral able to attenuate virus-induced inflammation. *Nat. Commun.* **14(1)**, 199 (2023).

#### 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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