

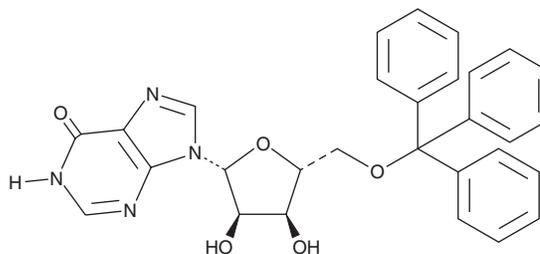
# PRODUCT INFORMATION



## KIN59

Item No. 19833

**CAS Registry No.:** 4152-77-6  
**Formal Name:** 5'-O-(triphenylmethyl)-inosine  
**Synonyms:** 5'-O-Tritylinosine  
**MF:** C<sub>29</sub>H<sub>26</sub>N<sub>4</sub>O<sub>5</sub>  
**FW:** 510.5  
**Purity:** ≥98%  
**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

KIN59 is supplied as a crystalline solid. A stock solution may be made by dissolving the KIN59 in the solvent of choice, which should be purged with an inert gas. KIN59 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of KIN59 in these solvents is approximately 0.3, 16, and 5 mg/ml, respectively.

KIN59 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, KIN59 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. KIN59 has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

KIN59 is a purine riboside derivative that allosterically inhibits thymidine phosphorylase (TPase; IC<sub>50</sub>s = 44 and 67 μM for purified *E. coli* and human enzymes, respectively).<sup>1,2</sup> Through this action, KIN59 blocks the conversion of thymidine to thymine. KIN59 inhibits TPase-induced angiogenesis in a chicken chorioallantoic membrane assay and reduces endothelial cell migration without impacting proliferation.<sup>1,2</sup> KIN59 also inhibits the binding of fibroblast growth factor 2 (FGF2) to FGF receptor 1, preventing the growth and neovascularization of subcutaneous tumors induced by FGF2-transformed endothelial cells injected in immunodeficient nude mice.<sup>3</sup>

### References

1. Liekens, S., Hernández, A. I., Ribatti, D., *et al.* The nucleoside derivative 5'-O-trityl-inosine (KIN59) suppresses thymidine phosphorylase-triggered angiogenesis *via* a noncompetitive mechanism of action *J. Biol. Chem.* **279**(28), 29598-29605 (2004).
2. Liekens, S., Bronckaers, A., Hernández, A. I., *et al.* 5'-O-tritylated nucleoside derivatives: Inhibition of thymidine phosphorylase and angiogenesis. *Mol. Pharmacol.* **70**(2), 501-509 (2006).
3. Liekens, S., Bronckaers, A., Belleri, M., *et al.* The thymidine phosphorylase inhibitor 5'-O-tritylinosine (KIN59) is an antiangiogenic multitarget fibroblast growth factor-2 antagonist. *Mol. Cancer Ther.* **11**(4), 817-829 (2012).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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