

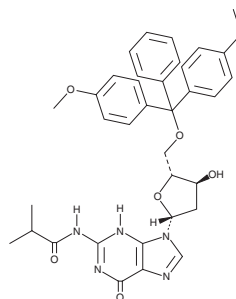
# PRODUCT INFORMATION



## N<sup>2</sup>-Isobutyryl-5'-O-(4,4'-dimethoxytrityl)-2'-deoxyguanosine

Item No. 30472

**CAS Registry No.:** 68892-41-1  
**Formal Name:** 5'-O-[bis(4-methoxyphenyl)phenylmethyl]-2'-deoxy-N-(2-methyl-1-oxopropyl)-guanosine  
**MF:** C<sub>35</sub>H<sub>37</sub>N<sub>5</sub>O<sub>7</sub>  
**FW:** 639.7  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 237 nm  
**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

N<sup>2</sup>-Isobutyryl-5'-O-(4,4'-dimethoxytrityl)-2'-deoxyguanosine is supplied as a solid. A stock solution may be made by dissolving the N<sup>2</sup>-isobutyryl-5'-O-(4,4'-dimethoxytrityl)-2'-deoxyguanosine in the solvent of choice, which should be purged with an inert gas. N<sup>2</sup>-Isobutyryl-5'-O-(4,4'-dimethoxytrityl)-2'-deoxyguanosine is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of N<sup>2</sup>-isobutyryl-5'-O-(4,4'-dimethoxytrityl)-2'-deoxyguanosine in ethanol is approximately 30 mg/ml and approximately 15 mg/ml in DMSO and DMF.

N<sup>2</sup>-Isobutyryl-5'-O-(4,4'-dimethoxytrityl)-2'-deoxyguanosine is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, N<sup>2</sup>-isobutyryl-5'-O-(4,4'-dimethoxytrityl)-2'-deoxyguanosine should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. N<sup>2</sup>-Isobutyryl-5'-O-(4,4'-dimethoxytrityl)-2'-deoxyguanosine has a solubility of approximately 0.25 mg/ml in a 1:3 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

N<sup>2</sup>-Isobutyryl-5'-O-(4,4'-dimethoxytrityl)-2'-deoxyguanosine is a building block that has been used in the synthesis of oligodeoxyribonucleotides.<sup>1-3</sup>

### References

1. Wilk, A., Grajkowski, A., Phillips, L.R., *et al.* The 4-[N-Methyl-N-(2,2,2-trifluoroacetyl)amino]butyl group as an alternative to the 2-cyanoethyl group for phosphate protection in the synthesis of oligodeoxyribonucleotides. *J. Org. Chem.* **64**(20), 7515-7522 (1999).
2. Grajkowski, A., Pedras-Vasconcelos, J., Wang, V., *et al.* Thermolytic CpG-containing DNA oligonucleotides as potential immunotherapeutic prodrugs. *Nucleic Acids Res.* **33**(11), 3550-3560 (2005).
3. Cieślak, J. and Beaucauge, S.L. Thermolytic properties of 3-(2-pyridyl)-1-propyl and 2-[N-methyl-N-(2-pyridyl)]aminoethyl phosphate/thiophosphate protecting groups in solid-phase synthesis of oligodeoxyribonucleotides. *J. Org. Chem.* **68**(26), 10123-10129 (2003).

#### 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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