

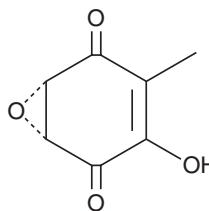
# PRODUCT INFORMATION



## Terreic Acid

Item No. 10010235

**CAS Registry No.:** 121-40-4  
**Formal Name:** (1R,6S)-3-hydroxy-4-methyl-7-oxabicyclo[4.1.0]hept-3-ene-2,5-dione  
**Synonyms:** TA, (-)-Terreic Acid  
**MF:** C<sub>7</sub>H<sub>6</sub>O<sub>4</sub>  
**FW:** 154.1  
**Purity:** ≥95%  
**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

Terreic acid (TA) is supplied as a solid. A stock solution may be made by dissolving the TA in the solvent of choice, which should be purged with an inert gas. TA is soluble in organic solvents such as ethanol, methanol, DMSO, and dimethyl formamide.

### Description

TA is a cell-permeable quinone epoxide that selectively inhibits Bruton's tyrosine kinase (BTK) catalytic activity ( $IC_{50}$  = 10 and 3  $\mu$ M for basal and activation levels, respectively).<sup>1-3</sup> TA binds to the BTK pleckstrin homology domain (BTK-PH) and blocks the interaction between BTK-PH and PKC ( $IC_{50}$  = 100  $\mu$ M in human mast cell lysates) without affecting the activity of PKC.<sup>2,3</sup> TA has minimal effect on Lyn, Syk, PKA, casein kinase I, ERK1, ERK2, and p38 kinase activities.<sup>3,4</sup>

### References

1. Guo, C.J., Sun, W.W., Bruno, K.S., *et al.* Molecular genetic characterization of terreic acid pathway in *Aspergillus terreus*. *Org. Lett.* **16(20)**, 5250-5253 (2014).
2. Kawakami, Y., Hartman, S.E., Kinoshita, E., *et al.* Terreic acid, a quinone epoxide inhibitor of Bruton's tyrosine kinase. *Proc. Natl. Acad. Sci. USA* **96**, 2227-2232 (1999).
3. Subramanian, T., Namasivayam, K.M., and Shanmugasundaram, E.R. In vivo and in vitro studies on the binding nature of terreic acid with macromolecules such as protein and nucleic acids. *Toxicol. Lett.* **10(2-3)**, 249-253 (1982).
4. Han, H., Yang, Y., Olesen, S.H., *et al.* The fungal product terreic acid is a covalent inhibitor of the bacterial cell wall biosynthetic enzyme UDP-N-acetylglucosamine 1-carboxyvinyltransferase (MurA). *Biochemistry* **49(19)**, 4276-4282 (2010).

#### 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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