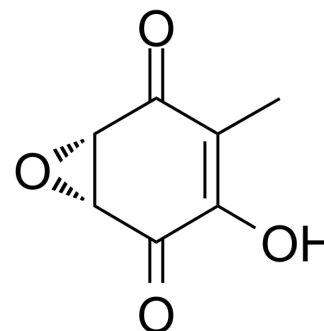


Terreic acid

Cat. No.:	HY-110013
CAS No.:	121-40-4
Molecular Formula:	C ₇ H ₆ O ₄
Molecular Weight:	154.12
Target:	Btk; Antibiotic
Pathway:	Protein Tyrosine Kinase/RTK; Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Terreic acid, a quinone epoxide antibiotic, acts as an effective Btk inhibitor. Terreic acid blocks the interaction between PKC and the pleckstrin homology domain of Btk. Terreic acid inhibits the binding of GST-BtkPH to PKC in lysates of HMC-1 human mast cells with an IC ₅₀ of approximately 100 μM ^[1] .								
IC₅₀ & Target	Btk; Antibiotic ^[1]								
In Vitro	<p>Terreic acid inhibits the association of Btk with PKCβII in mouse mast cells at lower concentrations (IC₅₀ of ≈30 μM). Terreic acid inhibits the catalytic activity of Btk but not PKC^[1].</p> <p>Terreic acid (pretreatment for 30 min before stimulation by antigen for 3 min) inhibits both the basal and activation levels of Btk autophosphorylating activity with IC₅₀s of 10 μM and 3 μM, respectively^[1].</p> <p>Terreic acid inhibits the autophosphorylating activity of Btk purified partially from recombinant baculovirus-infected Sf9 insect cells in a dose-dependent manner^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Western Blot Analysis^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>Mouse bone marrow-derived mast cells</td> </tr> <tr> <td>Concentration:</td> <td>0, 5, 10, 20 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>Pretreated for 30 min</td> </tr> <tr> <td>Result:</td> <td>Inhibited both the basal and activation levels of Btk autophosphorylating activity in a dose-dependent manner.</td> </tr> </table>	Cell Line:	Mouse bone marrow-derived mast cells	Concentration:	0, 5, 10, 20 μM	Incubation Time:	Pretreated for 30 min	Result:	Inhibited both the basal and activation levels of Btk autophosphorylating activity in a dose-dependent manner.
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In Vivo	<p>Terreic acid inhibits the late-phase response of in vivo allergic cutaneous reactions^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <table border="1"> <tr> <td>Animal Model:</td> <td>BALB/c mice^[1]</td> </tr> <tr> <td>Dosage:</td> <td>0, 0.15, 1.5, and 15 mg/kg</td> </tr> <tr> <td>Administration:</td> <td>Injected i.p. 1 hr before antigen challenge. Ear thicknesses were measured at 1 hr and 24 hr</td> </tr> </table>	Animal Model:	BALB/c mice ^[1]	Dosage:	0, 0.15, 1.5, and 15 mg/kg	Administration:	Injected i.p. 1 hr before antigen challenge. Ear thicknesses were measured at 1 hr and 24 hr		
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Result:

The early response, as examined 1 hr after antigen challenge, was not affected by TA.
In contrast, TA inhibited the late-phase (24 hr) response in a dose-dependent manner.

REFERENCES

[1]. Y Kawakami, et al. Terreic acid, a quinone epoxide inhibitor of Bruton's tyrosine kinase. Proc Natl Acad Sci U S A. 1999 Mar 2;96(5):2227-32.

Caution: Product has not been fully validated for medical applications. For research use only.

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