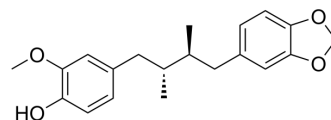


erythro-Austrobailignan-6

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|---------------------------|-------------------------------------------------------------------------------------------|
| Cat. No.: | HY-N11536 |
| CAS No.: | 114127-24-1 |
| Molecular Formula: | C ₂₀ H ₂₄ O ₄ |
| Molecular Weight: | 328.4 |
| Target: | Topoisomerase; Apoptosis |
| Pathway: | Cell Cycle/DNA Damage; Apoptosis |
| Storage: | Please store the product under the recommended conditions in the Certificate of Analysis. |



BIOLOGICAL ACTIVITY

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|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------------------------------------|----------------|---------|------------------|------------|---------|------------------------------------------------|------------|----------------------|----------------|--------|------------------|-------------------|---------|-----------------------------------------------------------------------------------------------------|
| Description | erythro-Austrobailignan-6 is an orally active anti-cancer agent. erythro-Austrobailignan-6 inhibits DNA topoisomerase I and II activity. erythro-Austrobailignan-6 induces cell apoptosis and increases phosphorylation of p38 and JNK ^{[1][2]} . | | | | | | | | | | | | | | | | |
| In Vitro | <p>erythro-Austrobailignan-6 (100 μM) inhibits DNA topoisomerase I more than 50%^[1].</p> <p>erythro-Austrobailignan-6 (0-30 μM, 24 or 48 h) inhibits the proliferation of 4T-1 cells and MCF-7 cells^[1].</p> <p>erythro-Austrobailignan-6 (2-30 μM, 24 or 48 h) induces apoptosis in 4T-1 and MCF-7 cells^[1].</p> <p>erythro-Austrobailignan-6 (10 μM, 30-120 min) increases phosphorylation of p38 and JNK in 4T-1 and MCF-7 cells^[1].</p> <p>erythro-Austrobailignan-6 (5 and 10 μM, 24 h) decreases EGFR/HER2 and topoisomerase in 4T-1 and MCF-7 cells^[1].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> <p>Cell Viability Assay^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>4T-1 and MCF-7 cells</td> </tr> <tr> <td>Concentration:</td> <td>0-30 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>24 or 48 h</td> </tr> <tr> <td>Result:</td> <td>Dose dependently inhibited cell proliferation.</td> </tr> </table> <p>Western Blot Analysis^[1]</p> <table border="1"> <tr> <td>Cell Line:</td> <td>4T-1 and MCF-7 cells</td> </tr> <tr> <td>Concentration:</td> <td>100 μM</td> </tr> <tr> <td>Incubation Time:</td> <td>30, 60 or 120 min</td> </tr> <tr> <td>Result:</td> <td>Increased phosphorylation of p38 and JNK. Activated caspase-3 and inhibited CDK-4 and cyclin D1.</td> </tr> </table> | Cell Line: | 4T-1 and MCF-7 cells | Concentration: | 0-30 μM | Incubation Time: | 24 or 48 h | Result: | Dose dependently inhibited cell proliferation. | Cell Line: | 4T-1 and MCF-7 cells | Concentration: | 100 μM | Incubation Time: | 30, 60 or 120 min | Result: | Increased phosphorylation of p38 and JNK. Activated caspase-3 and inhibited CDK-4 and cyclin D1. |
| Cell Line: | 4T-1 and MCF-7 cells | | | | | | | | | | | | | | | | |
| Concentration: | 0-30 μM | | | | | | | | | | | | | | | | |
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| Result: | Dose dependently inhibited cell proliferation. | | | | | | | | | | | | | | | | |
| Cell Line: | 4T-1 and MCF-7 cells | | | | | | | | | | | | | | | | |
| Concentration: | 100 μM | | | | | | | | | | | | | | | | |
| Incubation Time: | 30, 60 or 120 min | | | | | | | | | | | | | | | | |
| Result: | Increased phosphorylation of p38 and JNK. Activated caspase-3 and inhibited CDK-4 and cyclin D1. | | | | | | | | | | | | | | | | |
| In Vivo | <p>erythro-Austrobailignan-6 (food intake, for 20 days) inhibits tumor growth in 4T-1 tumor bearing mice^[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>4T-1 tumor bearing mice^[1]</td> </tr> </table> | Animal Model: | 4T-1 tumor bearing mice ^[1] | | | | | | | | | | | | | | |
| Animal Model: | 4T-1 tumor bearing mice ^[1] | | | | | | | | | | | | | | | | |

| | |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Dosage: | 20 mg/kg/day |
| Administration: | Food intake |
| Result: | Inhibited tumor growth by 40.8%; Down-regulated CDK-4, cyclin D1, HER2 and integrin β 3; Up-regulated cleaved caspase-3 in tumor. |

REFERENCES

- [1]. Han JH, et al. Erythro-austrobailignan-6 down-regulates HER2/EGFR/integrin β 3 expression via p38 activation in breast cancer. *Phytomedicine*. 2017 Jan 15;24:24-30.
- [2]. Lee YK, et al. Inhibition of DNA topoisomerases I and II and cytotoxicity by lignans from *Saururus chinensis*. *Arch Pharm Res*. 2009 Oct;32(10):1409-15.
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Caution: Product has not been fully validated for medical applications. For research use only.

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