Warangalone

Cat. No.: HY-N1074

CAS No.: 4449-55-2

Molecular Formula: $C_{25}H_{24}O_5$

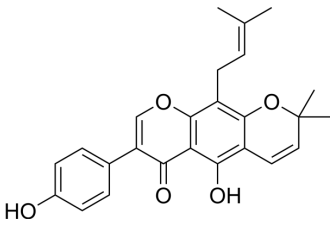
Molecular Weight: 404.46

Target: Parasite; PKA

Pathway: Anti-infection; Stem Cell/Wnt; TGF-beta/Smad

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



BIOLOGICAL ACTIVITY

Description	Warangalone is an anti-malarial compound which can inhibit the growth of both strains of parasite 3D7 (chloroquine sensitive) and K1 (chloroquine resistant) with IC_{50}s of 4.8 μg/mL and 3.7 μg/mL, respectively. Warangalone can also inhibit cyclic AMP-dependent protein kinase catalytic subunit (cAK) with an IC_{50} of 3.5 μM.
IC_{50} & Target	Plasmodium
In Vitro	Warangalone is an anti-malarial compound which can inhibit the growth of both strains of parasite 3D7 (chloroquine sensitive) and K1 (chloroquine resistant) with IC_{50}s of 4.8 μg/mL and 3.7 μg/mL, respectively[1]. Warangalone can also inhibit cyclic AMP-dependent protein kinase catalytic subunit (cAK) with an IC_{50} of 3.5 μM[2]. When HL-60 cells are exposed to Warangalone (30 μM) for 24 h, Warangalone induces a significant decrease (8%) in cell viability compare to controls. Warangalone also inhibits HL-60 cell growth within 24 h in a time-dependent fashion. A time-dependent increase in caspase-9 activity is observed in Warangalone-treated cells[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Kinase Assay [3]	The enzyme activities of caspase-3 and caspase-9 are measured using a caspase fluorometric assay kit. Cells are seeded in 24-well plates at a density of 3×10^6 cells per well. After exposure of the cells to Warangalone for the allotted time periods, the cells are washed three times with PBS, and then lysed in a lysis buffer for 10 min on ice. The protein content of the cell lysates is assayed with a Micro BCA reagent. Cell lysates containing 50 μg of protein are incubated with a caspase-3 fluorogenic substrate (DEVD-AFC) or a caspase-9 fluorogenic substrate (LEHD-AFC) for 1 h at 37°C. Caspase activity is measured by fluorometric detection[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Cell Assay [3]	Cell viability is determined using the Cell Titer 96 Aqueous assay kit. Cells are seeded in 96-well plates at a density of 1×10^5 cells per well. The cells are maintained for 24 h at 37°C and then Warangalone (30 μM) is added to the culture medium. MTS solution is added to the 96-well plates at the indicated time points, and the cells are incubated for 1 h at 37°C. The absorbance is measured at a wavelength of 490 nm with a microplate counter[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Tati Herlina, et al. ANTI-MALARIAL COMPOUND FROM THE STEM BARK OF Erythrina variegate. Indo. J. Chem., 2009, 9 (2), 308-311.

[2]. Wang BH, et al. Specific inhibition of cyclic AMP-dependent protein kinase by warangalone and robustic acid. Phytochemistry. 1997 Mar;44(5):787-96.

[3]. Induction of apoptosis by isoflavonoids from the leaves of Millettia taiwaniana in human leukemia HL-60 cells. Planta Med. 2006 Apr;72(5):424-9.

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

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