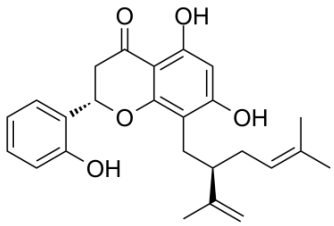
Kushenol A

Cat. No.:	HY-N2278
CAS No.:	99217-63-7
Molecular Formula:	$C_{25}H_{28}O_5$
Molecular Weight:	408.49
Target:	Tyrosinase; Glucosidase
Pathway:	Metabolic Enzyme/Protease
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



BIOLOGICAL ACTIVITY

Description	Kushenol A (Leachianone E) is isolated from the root of Sophora flavescent. Kushenol A is a non-competitive tyrosinase inhibitor to block the conversion of L-tyrosine to L-DOPA, shows IC_{50} and $K_i$values of 1.1 μM and 0.4 μM, respectively[1]. Kushenol A is a flavonoid antioxidant, has inhibitory effects on alpha-glucosidase (IC_{50}: 45 μM; K_i: 6.8 μM) and β-amylase[2]. Kushenol A is confirmed as potential inhibitors of enzymes targeted by cosmetics for skin whitening and aging[1].
IC_{50} & Target	IC50: 1.1 μM (tyrosinase); 45 μM (alpha-glucosidase)[1][2]
In Vitro	Kushenol A (25 μM) exhibits a highly potent inhibitory activity on ABTS+ radical scavenging with an IC_{50} value of 9.7 ± 0.1 μM, and exhibits inhibits scavenging activity as a percentage 93.7% at 25 μM[1]. Kushenol A (0-60 μg/ml; 24 hours) shows considerable cytotoxic effects against NSCLC cells, exhibits IC_{50} values of 5.3 μg/ml and 20.5 μg/ml for A549 and NCI□H226 cells, respectively. It shows an IC_{50} value of 57.2 μg/ml for BEAS-2B cells[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[3]

Cell Line:	NSCLC cell lines, A549 and NCI-H226 Normal human lung epithelial: BEAS-2B
Concentration:	0-60 μg/ml
Incubation Time:	24 hours
Result:	Exhibited considerable cytotoxic effects against NSCLC cells.

REFERENCES

[1]. Kim JH, et al. Kushenol A and 8-prenylkaempferol, tyrosinase inhibitors, derived from Sophora flavescens. J Enzyme Inhib Med Chem. 2018 Dec;33(1):1048-1054.

[2]. Kim JH, et al. Glycosidase inhibitory flavonoids from Sophora flavescens. Biol Pharm Bull. 2006 Feb;29(2):302-5.

[3]. Chen H, et al.
A Novel Flavonoid Kushenol Z from Sophora flavescens Mediates mTOR Pathway by Inhibiting Phosphodiesterase and Akt Activity to Induce Apoptosis in Non-Small-Cell Lung Cancer Cells.Molecules. 2019 Dec 4;24(24). pii: E4425.

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

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