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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
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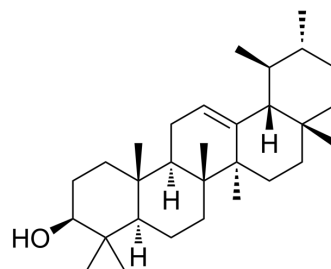
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α -Amyrin

| | |
|---------------------------|------------------------------------------------------------------------------------------------|
| Cat. No.: | HY-N8423 |
| CAS No.: | 638-95-9 |
| Molecular Formula: | C ₃₀ H ₅₀ O |
| Molecular Weight: | 426.72 |
| Target: | ERK; GSK-3 |
| Pathway: | MAPK/ERK Pathway; Stem Cell/Wnt; PI3K/Akt/mTOR |
| Storage: | 4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light) |



SOLVENT & SOLUBILITY

In Vitro

Methanol : 1 mg/mL (2.34 mM); ultrasonic and warming and heat to 60°C)

| Concentration | Solvent | Mass | | |
|---------------|---------|-----------|------------|------------|
| | | 1 mg | 5 mg | 10 mg |
| 1 mM | | 2.3435 mL | 11.7173 mL | 23.4346 mL |
| 5 mM | | --- | --- | --- |
| 10 mM | | --- | --- | --- |

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

α -Amyrin is a pentacyclic triterpenoid compound with oral activity. α -Amyrin activates the ERK and GSK-3 β signaling pathways. α -Amyrin can be used in the study of metabolic syndrome induced by high fructose diet and cognitive dysfunction caused by low cholinergic neurotransmission^{[1][2][3]}.

In Vitro

α -Amyrin (10 μ M, 24 h) induces AMPK and PPAR δ / γ -mediated GLUT4 translocation in C2C12 myoblasts^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay^[1]

| | |
|------------------|----------------------------------------|
| Cell Line: | C2C12 |
| Concentration: | 1, 10 100 μ M |
| Incubation Time: | 24 h |
| Result: | Reduced cell viability at 100 μ M. |

Western Blot Analysis^[1]

| | | |
|----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | Cell Line: | C2C12 |
| | Concentration: | 10 μ M |
| | Incubation Time: | 24 h |
| | Result: | Increased the mRNA and protein expression of PPARs, GLUT4 and FATP. |
| In Vivo | <p>α-Amyrin (50, 100, 200 mg/kg orally, once daily for 42 days) can reduce the survival rate of rats with metabolic syndrome induced by high fructose diet^[2].</p> <p>α-Amyrin (2 or 4 mg/kg, orally) improves cognitive dysfunction caused by low cholinergic neurotransmission in mice by activating ERK and GSK-3β signaling pathways^[3].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p> | |
| | Animal Model: | High-fructose diet (HFD)-induced metabolic syndrome in rats ^[2] |
| | Dosage: | 50, 100, 200 mg/kg |
| | Administration: | p.o. |
| | Result: | Decreased systolic blood pressure, plasma glucose, total cholesterol, and plasma triglycerides. Attenuated hepatic oxidative stress as well as micro- and macrovesicular fatty changes in hepatocytes caused by HFD. |
| | Animal Model: | Scopolamine-Induced Memory Impairment Mice ^[3] |
| | Dosage: | 2 or 4 mg/kg |
| | Administration: | p.o. |
| | Result: | Increased the expression levels of phosphorylated extracellular signal-regulated kinase 1/2 (pERK) and phosphorylated glycogen synthase kinase-3 β (pGSK-3 β). |

CUSTOMER VALIDATION

- Trop Med Infect Dis. 2023 May 3, 8(5), 263.

See more customer validations on www.MedChemExpress.com

REFERENCES

- [1]. Giacomani-Martínez A, et al. α -Amyrin induces GLUT4 translocation mediated by AMPK and PPAR δ / γ in C2C12 myoblasts. Can J Physiol Pharmacol. 2021 Sep;99(9):935-942.
- [2]. Prabhakar P, et al. α -Amyrin attenuates high fructose diet-induced metabolic syndrome in rats. Appl Physiol Nutr Metab. 2017 Jan;42(1):23-32.
- [3]. Park SJ, et al. Amyrin attenuates scopolamine-induced cognitive impairment in mice. Biol Pharm Bull. 2014;37(7):1207-13.

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

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