

PRODUCT INFORMATION



Acevaltrate

Item No. 44641

CAS Registry No.: 25161-41-5

Formal Name: 3-(acetyloxy)-3-methyl-butanoic acid, (1S,2'R,6S,7aS)-4-[(acetyloxy)methyl]-6,7a-dihydro-1-(3-methyl-1-oxobutoxy)spiro[cyclopenta[c] pyran-7(1H),2'-oxiran]-6-yl ester

MF: $C_{24}H_{32}O_{10}$

FW: 480.5

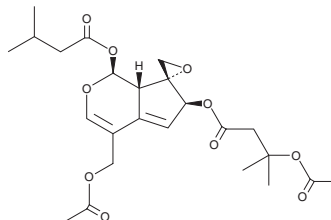
Purity: $\geq 95\%$

Supplied as: A solid

Storage: -20°C

Stability: ≥ 4 years

Item Origin: Plant/*Valeriana officinalis* L.



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Acevaltrate is supplied as a solid. A stock solution may be made by dissolving the acevaltrate in the solvent of choice, which should be purged with an inert gas. Acevaltrate is sparingly soluble (1-10 mg/ml) in ethanol and DMSO.

Description

Acevaltrate is an iridoid valepotriate that has been found in *V. glechomifolia* and has diverse biological activities.¹⁻³ It inhibits Na^+/K^+ -ATPase in isolated rat kidney that endogenously expresses this transporter ($\text{IC}_{50} = 22.8 \mu\text{M}$) and H^+/K^+ -ATPase activity by 60.7% in isolated rat gastric epithelium, which endogenously expresses H^+/K^+ -ATPase, when used at a concentration of $100 \mu\text{M}$.¹ Acevaltrate ($1-4 \mu\text{M}$) induces pyroptosis in OCI-My5 and OPM-2 multiple myeloma cells.² It increases the production of reactive oxygen species (ROS), inhibits glutathione peroxidase 4 (GPX4), and induces ferroptosis in RKO colon cancer cells when used at a concentration of $5 \mu\text{M}$.³ *In vivo*, acevaltrate (10, 25, and 50 mg/kg) reduces tumor volume and increases intratumoral malondialdehyde (MDA) levels in an RKO mouse xenograft model.

References

1. Bettero, G.M., Salles, L., Rosário Figueira, R.M., *et al.* *In vitro* effect of valepotriates isolated from *Valeriana glechomifolia* on rat P-type ATPases. *Planta Med.* **77**(15), 1702-1706 (2011).
2. Wang, Y., Cui, Y., Liu, Z., *et al.* Acevaltrate overcomes myeloma resistance to bortezomib via pyroptosis by promoting BAX translocalization to mitochondria. *Eur. J. Pharmacol.* **996**, 177572 (2025).
3. Yu, D., Hu, H., Zhang, Q., *et al.* Acevaltrate as a novel ferroptosis inducer with dual targets of PCBP1/2 and GPX4 in colorectal cancer. *Signal Transduct. Target Ther.* **10**(1), 211 (2025).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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