

# Saikosaponin D

## Catalog No: tcsc0008281



### Available Sizes

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**Size:** 5mg

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**Size:** 10mg

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**Size:** 25mg

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**Size:** 50mg

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**Size:** 100mg

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### Specifications

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**CAS No:**

20874-52-6

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**Formula:**

$C_{42}H_{68}O_{13}$

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**Pathway:**

Others; JAK/STAT Signaling; Stem Cell/Wnt; NF-κB

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**Target:**

Estrogen Receptor/ERR; STAT; STAT; NF-κB

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**Purity / Grade:**

>98%

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**Solubility:**

H<sub>2</sub>O :

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**Observed Molecular Weight:**

780.98

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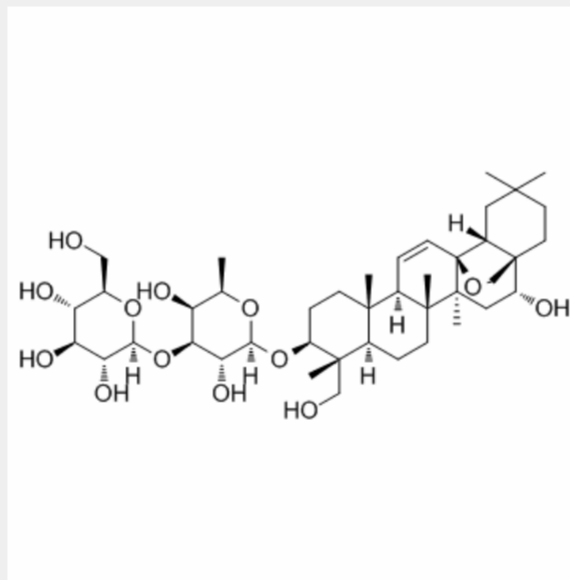
## Product Description

Saikosaponin D is a triterpene saponin isolated from Bupleurum, with anti-inflammatory, anti-bacterial, anti-tumor, and anti-allergic activities; Saikosaponin D inhibits **selectin**, **STAT3** and **NF-kB** and activates **estrogen receptor-β**.

IC50 & Target: Selectin<sup>[1]</sup>, STAT3, NF-kB<sup>[2]</sup>, Estrogen receptor-β<sup>[3]</sup>

**In Vitro:** Saikosaponin D (Compound 3) is a triterpene saponin, which inhibits E-selectin, L-selectin and P-selectin binding to THP-1 cells, with IC<sub>50</sub>s of 1.8 μM, 3.0 μM and 4.3 μM, and such effects are not due to cytotoxic action. Saikosaponin D (1, 5, 10 μM) dose-dependently inhibits the THP-1 adhesion to the HUVECs monolayer activated by TNF-α. Saikosaponin D (30 μM) also inhibits the expression of P-selectin ligand (CD162) in THP-1 cells<sup>[1]</sup>. Saikosaponin D (5 μM) suppresses the proliferation of HSC-T6 cells induced by H<sub>2</sub>O<sub>2</sub> treatment, reduces the expression levels of α-SMA, TGF-β1, Hyp, COL1 and TIMP-1, and increases MMP-1 expression, thus inhibiting H<sub>2</sub>O<sub>2</sub>-induced excessive extracellular matrix (ECM) formation, with similar effects to estradiol (E2), and these effects are blocked by ER antagonists. Saikosaponin D also inhibits oxidative stress-induced ROS generation and down regulates MAPK signaling pathway, and the inhibition is also suppressed by ER antagonists<sup>[3]</sup>.

**In Vivo:** Saikosaponin D (2 mg/kg/day, i.p.) shows a protective effect on overdose of acetaminophen (APAP)-induced liver injury of mice. Saikosaponin D affects APAP metabolism, increases GSH levels but does not alter PPARα activation. Saikosaponin D (2 mg/kg/day, i.p.) also suppresses APAP-induced increases in the expression of STAT3 target genes and pro-inflammatory cytokines and inhibits APAP-induced activation of STAT3 and NF-kB<sup>[2]</sup>.



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!