

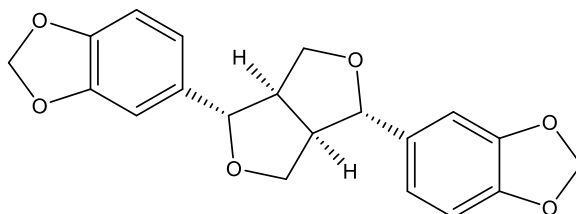
Catalog # 10-2512

(+)-Sesamin

CAS# 607-80-7

5-[(3S,3aR,6S,6aR)-3-(1,3-Benzodioxol-5-yl)-1,3,3a,4,6,6a-hexahydrofuro[3,4-c]furan-6-yl]-1,3-benzodioxole

Lot # FBS2196



Sesamin is a natural product derived from sesame seeds with anticancer¹, antioxidant², anti-inflammatory/immunomodulatory³, and antidiabetic^{4,5} effects. It also displayed effects on cholesterol and fatty acid metabolism.⁶ Sesamin was recently found to inhibit bacterial L-tryptophan indole lyase (K_i = 7 μM).⁷ This enzyme reacts with dietary tryptophan to produce the uremic toxin indoxyl sulfate which exacerbates chronic kidney disease.

- 1) Majdalawieh *et al.* (2017) *A comprehensive review on the anti-cancer properties and mechanisms of action of sesamin, a lignan in sesame seeds (Sesamum indicum)*; Eur. J. Pharmacol. **815** 512
- 2) Kiso (2004) *Antioxidative role of sesamin, a functional lignan in sesame seed, and its effect on lipid- and alcohol-metabolism in the liver: a DNA microarray study*; Biofactors **21** 191
- 3) Majdalawieh *et al.* (2021) *Immunomodulatory and anti-inflammatory effects of sesamin: mechanisms of action and future directions*; Crit. Rev. Food Sci. Nutr. **5** 1
- 4) Shahi *et al.* (2017) *Effect of Sesamin Supplementation on Glycemic Status, Inflammatory Markers, and Adiponectin Levels in Patients with Type 2 Diabetes Mellitus*; J. Diet. Suppl. **14** 65
- 5) Farbood *et al.* (2019) *Sesamin: A promising protective agent against diabetes-associated cognitive decline in rats*; Life Sci. **230** 169
- 6) Majdalawieh *et al.* (2020) *Effects of sesamin on fatty acid and cholesterol metabolism, macrophage cholesterol homeostasis and serum lipid profile: a comprehensive review*; Eur. J. Pharmacol. **173417**
- 7) Oikawa *et al.* (2022) *(+)-Sesamin, a sesame lignan, is a potent inhibitor of gut bacterial tryptophan indole-lyase that is a key enzyme in chronic kidney disease pathogenesis*; Biochem. Biophys. Res. Commun. **590** 158

PHYSICAL DATA

Molecular Weight:	354.36
Molecular Formula:	C ₂₀ H ₁₈ O ₆
Purity:	>98% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (>25 mg/mL)
Physical Description:	White solid
Storage and Stability:	Store as supplied at -20°C for up to 2 years from the date of purchase. Solutions in DMSO may be stored at -20°C for up to 3 months.

Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.