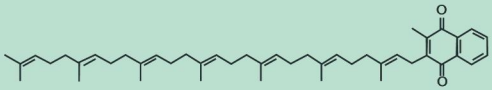
维生素K2（MK-7）

CAS号：2124-57-4

化学式：$C_{46}H_{64}O_2$

分子量：649.02



描述

维生素K2，主要有MK-4和MK-7等多种形式，其中MK-7因生物利用度更高、半衰期更长而备受关注。维生素K2的核心价值在于其独特的“钙引导”功能——它通过激活骨钙素和基质Gla蛋白（MGP），精准调控体内钙的沉积方向，实现引钙入骨、阻钙入血的双向调节，被誉为“骨骼与血管健康的分子开关”广泛用于膳食补充剂。

规格（全反式）

粉0.2%/0.25%/1.0%/1.3%/1.5%/2%/5%/纯品

油0.15%/0.45%/0.5%/1%/1.3%/2%/5%/10%

功能

- **促进骨骼健康**

骨钙素是一种由成骨细胞分泌的维生素K依赖性蛋白(VKDP)，只有在经过γ-羧化后才能结合钙离子并沉积于骨基质中，MK-7是骨钙素高效羧化的关键辅因子，通过激活骨钙素，帮助将血液中的钙离子引导至骨骼，促进骨矿化，增加骨密度和骨强度，降低骨质疏松症和骨折风险。

- **维护心血管健康**

基质Gla蛋白（Matrix Gla Protein, MGP）是体内最强的血管钙化抑制剂，其活性完全依赖于维生素K介导的γ-羧化。MK-7通过激活MGP，抑制钙离子在血管壁、肾脏等软组织的异常沉积，减少血管钙化，维持血管弹性，降低动脉硬化、冠心病等心血管疾病风险。

优势

- 规格丰富，有些冷水可分散，配方适配范围广。
- 全反式，生物利用率高。
- 可供应纯品

推荐摄入量：90~180 μg/天

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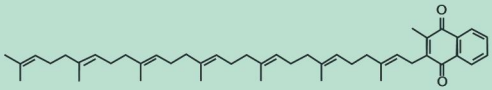
Vitamin K2 (Menaquinone-7)

CAS number: 2124-57-4

Chemical formula: $C_{46}H_{64}O_2$

Molecular weight: 649.02



Description

Vitamin K2 exists in various forms, primarily MK-4 and MK-7. Among these, MK-7 has attracted significant attention due to its higher bioavailability and longer half-life. The core value of Vitamin K2 lies in its unique 'calcium-guiding' function—by activating osteocalcin and matrix Gla protein (MGP), it precisely regulates the direction of calcium deposition within the body, achieving bidirectional regulation that directs calcium into the bones and prevents it from entering the bloodstream. Hailed as the 'molecular switch for bone and vascular health', it is widely used in dietary supplements.

Specification

Powder: 0.2%/0.25%/1.0%/1.3%/1.5%/2%/5%/Pure
Oil: 0.15%/0.45%/0.5%/1%/1.3%/2%/5%/10%

Functions

- **Promotes bone health**

Osteocalcin is a vitamin K-dependent protein (VKDP) secreted by osteoblasts. It can only bind calcium ions and deposit into bone matrix after undergoing gamma-carboxylation. As an essential cofactor for efficient gamma-carboxylation of osteocalcin, MK-7 activates osteocalcin to shuttle circulating calcium into bone tissue, facilitating bone mineralization, boosting bone mineral density and bone strength, and cutting the risks of osteoporosis and bone fracture.

- **Maintaining cardiovascular health**

Matrix Gla Protein (MGP) is the body's most potent endogenous inhibitor of vascular calcification, whose biological activity entirely relies on vitamin K-mediated gamma-carboxylation. By activating MGP, MK-7 suppresses abnormal calcium deposition in soft tissues including vascular walls and kidneys, alleviates vascular calcification, preserves vascular elasticity, and reduces the incidence of arteriosclerosis, coronary heart disease and other cardiovascular disorders.

Advantages

- Available in a wide range of specifications, and some are dispersible in cold water, so suitable for a broad range of formulations.
- All-Trans form, offering high bioavailability.
- Pure MK-7 is available.

Recommended Dosage: 90 ~ 180μg per day

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