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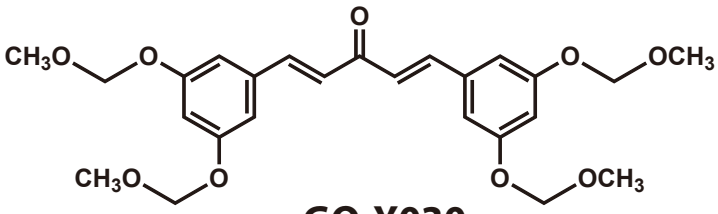
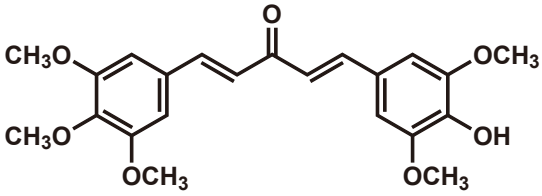
Curcumin Analogues with Enhanced Antitumor Activities



GO-Y030
20 mg / 100mg
[B4823]



GO-Y078
20 mg / 100mg
[H1525]

Advantages

- **Enhanced Antitumor Activities**
- **Strong Multi-Target Inhibitory Activities**
- **Increased Bioavailability**
- **Improved Water Solubility (GO-Y078)**

Curcumin, a dietary constituent of turmeric, has chemopreventive and chemotherapeutic potentials against various types of cancers, but low bioavailability prevents its use in chemotherapeutic applications. GO-Y030 and GO-Y078 are new synthetic analogues of curcumin, developed by Shibata, Iwabuchi *et al*. to increase its potential and circumvent its low bioavailability.
According to their reports, GO-Y030 shows a 30-fold greater suppression of tumor cell growth compared with curcumin.[1] GO-Y030 inhibits signal transducers and activators of transcription 3 (STAT3)[2,3] and IKKβ kinase[4], and suppresses tumor growth of cancer stem cells.[3] GO-Y030 and GO-Y078 suppress the growth of myeloma cells, and are 7 to 12 times more effective than curcumin.[5] GO-Y030 and GO-Y078 are also 6- to 15-fold stronger multi-target inhibitors of NF-κB, PI3K/AKT, JAK/STAT3 and IRF4 pathways than curcumin.[5] GO-Y078 also potently inhibits interleukin 6 (IL-6) production 14-fold more than curcumin[5], and inhibits tumor angiogenesis through actin disorganization.[6] In addition, GO-Y078 has the additional characteristics of improved water solubility (GO-Y078: 1.07 mg/L, curcumin: 0.54 mg/L) and effectiveness in a mouse model of gastric cancer.[7] Furthermore, the structure activity relationships of these compounds have been reported.[8]

References

1) H. Shibata, H. Yamakoshi, A. Sato, H. Ohori, Y. Kakudo, C. Kudo, Y. Takahashi, M. Watanabe, H. Takano, C. Ishioka, T. Noda, Y. Iwabuchi, *Cancer Sci.* **2009**, *100*, 956.
2) B. Hutzen, L. Friedman, M. Sobo, L. Lin, L. Cen, S. De Angelis, H. Yamakoshi, H. Shibata, Y. Iwabuchi, J. Lin, *Int. J. Oncol.* **2009**, *35*, 867.
3) L. Lin, Y. Liu, H. Li, P.-K. Li, J. Fuchs, H. Shibata, Y. Iwabuchi, J. Lin, *Br. J. Cancer* **2011**, *105*, 212.
4) A. Sato, C. Kudo, H. Yamakoshi, Y. Uehara, H. Ohori, C. Ishioka, Y. Iwabuchi, H. Shibata, *Cancer Sci.* **2011**, *102*, 1045.
5) C. Kudo, H. Yamakoshi, A. Sato, H. Ohori, C. Ishioka, Y. Iwabuchi, H. Shibata, *Anticancer Res.* **2011**, *31*, 3719.
6) S. Sugiyama, Y. Yoshino, S. Kuriyama, M. Inoue, K. Komine, K. Otsuka, A. Kohyama, H. Yamakoshi, C. Ishioka, M. Tanaka, Y. Iwabuchi, H. Shibata, *Anti-Cancer Agents Med. Chem.* **2016**, in press.
7) C. Kudo, H. Yamakoshi, A. Sato, H. Nanjo, H. Ohori, C. Ishioka, Y. Iwabuchi, H. Shibata, *BMC Pharmacol.* **2011**, *11*, 4.
8) A. Kohyama, H. Yamakoshi, S. Hongo, N. Kanoh, H. Shibata, Y. Iwabuchi, *Molecules* **2015**, *20*, 15374.

Related Products

Curcumin (Natural)	1g / 25g **[C0434]**
Curcumin (Synthetic)	5g / 25g **[C2302]**

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