

# 11-Keto-beta-boswellic acid Datasheet

4<sup>th</sup> Edition (Revised in July, 2016)

#### [ Product Information ]

Name: 11-Keto-beta-boswellic acid

Catalog No.: CFN90152

Cas No.: 17019-92-0

**Purity:** > 98%

 $\textbf{M.F:} C_{30}H_{46}O_4$ 

M.W: 470.68

Physical Description: White powder

Synonyms: 3-Hydroxy-4,6a,6b,8a,11,12,14b-heptamethyl-14-oxo-1,2,3,4a,5,6,7,8,9,10,

11,12,12a,14a-tetradecahydropicene-4-carboxylic acid.

### [Intended Use]

- 1. Reference standards;
- 2. Pharmacological research;
- 3. Food research;
- 4. Cosmetic research;
- 5. Synthetic precursor compounds;
- 6. Intermediates & Fine Chemicals;
- 7. Ingredient in supplements, beverages;
- 8. Others.

## [Source]



The herbs of Boswellia carterii.

#### [Biological Activity or Inhibitors]

11-Keto-β-boswellic acid (KBA) is a triterpenoid compound from extracts of Boswellia serrata, a novel Nrf2 activator, it can increase the Nrf2 and HO-1 expression, which provides protection against oxygen and glucose deprivation (OGD)-induced oxidative insult, but knockdown of Nrf2 or HO-1 will attenuate the protective effect of KBA;suggests that the neuroprotection of KBA against oxidative stress-induced ischemic injury involves the Nrf2/HO-1 pathway.<sup>[1]</sup>

11-Keto-β-boswellic acid reveals anti-tumoral activity against both ascitic and solid murine tumor models, it induces apoptosis in HL-60 cells due to the inhibition of topoisomerases I and II.<sup>[2]</sup>

11-Keto-boswellic acid derived amides and monodesmosidic saponins induce apoptosis in breast and cervical cancers cells.<sup>[3]</sup>

11-Keto-β-boswellic acid is a selective 5-lipoxygenase (5-LOX) inhibitor, it exerts dose dependent cardioprotective effect manifested by dose-dependent reduction in serum lactate dehydrogenase and infract size through mechanisms related to enhancement of antioxidant capacity and prevention of inflammatory cascades.<sup>[4]</sup>

#### [Solvent]

Chloroform, Dichloromethane, Ethyl Acetate, DMSO, Acetone, etc.

#### [ HPLC Method ]<sup>[5]</sup>

Mobile phase: Acetonitrile-H2O(adjusted to pH 4 by glacial acetic acid)=90:10 ;

Flow rate: 1.0 ml/min;

Column temperature: 25 °C;

The wave length of determination: 254 nm.

## [Storage]

2-8°C, Protected from air and light, refrigerate or freeze.

## [ References ]

[1] Yi D, Chen M C, Wang M M, et al. Mol. Neurobiol., 2015, 52(3):1-10.

[2] Chashoo G, Singh S K, Sharma P R, et al. Chem. Biol. Int., 2011, 189(1-2):60-71.

[3] Csuk R, Barthel-Niesen A, Barthel A, et al. Eur. J. Med. Chem., 2015, 100(14):98-105.

[4] Elshazly S M, Motteleb D M A E, Nassar N N. N-S. Arch. Pharmacol., 2013, 386(9):

823-33.

[5] Nikam T D, Ghorpade R P, Nitnaware K M, *et al. Physiol. Mol. Biol. Pla., 2013, 19(1):* 105-16.

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