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## Product Data Sheet

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Product Name: Chebolic acid

Cat. No.: GC35672

**Chemical Properties**

Cas. No. 23725-05-5

SMILES O=C(O)[C@H]([C@@H](C1=C(O)C(O)=C(O)C=C12)[C@@H](C(O)=O)OC2=O)CC(O)=O

Formula C<sub>14</sub>H<sub>12</sub>O<sub>11</sub>

M.Wt 356.24

Solubility DMSO: 260 mg/mL (729.85 mM)

Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure **Background**

Chebolic acid is a phenol that has been found in *T. chebular* and has diverse biological activities.<sup>1,2,3</sup> It reduces production of reactive oxygen species (ROS) in human umbilical vein endothelial cells (HUVECs) induced by glyceraldehyde-related advanced glycation end products (glycer-AGEs) when used at a concentration of 100 µg/ml.<sup>1</sup> Chebolic acid reduces glycer-AGE-induced adhesion of HUVECs to THP-1 monocytes. It induces Nrf2 nuclear translocation and glutathione (GSH) synthesis and inhibits glycer-AGE-induced collagen accumulation, a marker of fibrosis, in LX-2 hepatic stellate cells.<sup>2</sup> *In vivo*, chebolic acid (25 and 50 mg/kg) increases serum insulin levels and reduces blood urea nitrogen levels, proteinuria, albuminuria, and serum glucose levels in a diabetic rat model of ischemia-reperfusion-induced nephropathy.<sup>3</sup>

1.Lee, H.-S., Koo, Y.-C., Suh, H.J., et al.Preventive effects of chebolic acid isolated from Terminalia chebula on advanced glycation endproduct-induced endothelial cell dysfunction]. *Ethnopharmacol.*131(3)567-574(2010) 2.Koo, Y.-C., Pyo, M.C., Nam, M.-H., et al.Chebolic acid prevents hepatic fibrosis induced by advanced glycation end-

**Caution: Product has not been fully validated for medical applications. For research use only.**

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products in LX-2 cell by modulating Nrf2 translocation via ERK pathway Toxicol. In Vitro 348-15(2016) 3. Silawat, N., and Gupta, V.B. Chebulic acid attenuates ischemia reperfusion induced biochemical alteration in diabetic rats Pharm. Biol. 51(1)23-29(2013)

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