SZABO SCANDIC

Part of Europa Biosite

Produktinformation

- Forschungsprodukte & Biochemikalien
- Zellkultur & Verbrauchsmaterial
- Diagnostik & molekulare Diagnostik
- Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

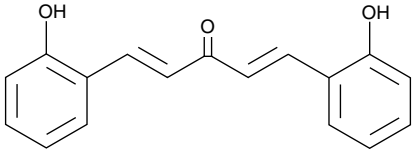
linkedin.com/company/szaboscandic

Product Information

2-HBA

Item No. 11879

CAS Registry No.:	131359-24-5
Formal Name:	(1E,4E)-1,5-bis(2-hydroxyphenyl)-1,4-pentadien-3-one
Synonym:	*Bis*(2-hydroxybenzylidene)acetone
MF:	$C_{17}H_{14}O_3$
FW:	266.3
Purity:	≥98%
Stability:	≥2 years at -20°C
Supplied as:	A crystalline solid
UV/Vis.:	λ_{max}: 212, 259, 311, 373 nm



Laboratory Procedures

For long term storage, we suggest that 2-HBA be stored as supplied at -20°C. It should be stable for at least two years.

2-HBA is supplied as as a crystalline solid. A stock solution may be made by dissolving the 2-HBA in the solvent of choice. 2-HBA is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of 2-HBA in these solvents is approximately 14, 11, and 12 mg/ml, respectively.

2-HBA is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 2-HBA should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. 2-HBA has a solubility of approximately 0.5 mg/ml in a 1:1 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Nrf2 activation of the antioxidant response element (ARE) is central to cytoprotective gene expression against oxidative and/or electrophilic stress.[1] Unless activated by inflammatory, environmental, or oxidative stressors, Nrf2 is sequestered in the cytoplasm by its repressor, Keap1.[2] Because of its protective capabilities, small molecules that activate Nrf2 signaling are being examined as potential anti-cancer or anti-inflammatory agents.[3] 2-HBA, a synthetic analog of curcumin, is an indirect inducer of enzymes that catalyze detoxification reactions through the Keap1-Nrf2-ARE pathway. As a double Michael reaction acceptor, 2-HBA can directly modify cysteine sulfhydryl groups in Keap1 and consequently suppress Nrf2 ubiquitination, which leads to enhanced expression of antioxidative and cytoprotective enzymes.[4] 2-HBA doubles the specific activity of NAD(P)H:quinone acceptor oxidoreductase 1 (NQO1) in Hepa1c1c7 cells at 0.15 µM.[5] In rapidly dividing mouse leukemia L1210 cells, 0.6 µM 2-HBA increases the activities of NQO1, glutathione reductase, and the levels of total glutathione.[5,6] At 5-15 µM, 2-HBA causes G_2/M cell cycle arrest and p53-independent, caspase 3-mediated apoptosis.[5]

References

1. Wang, R., Kern, J.T., Goodfriend, T.L., *et al. Prostaglandins Leukot. Essent. Fatty Acids* **81**, 53-59 (2009).
2. Gao, L., Wang, J., Sekhar, K.R., *et al. J. Biol. Chem.* **282(4)**, 2529-2537 (2007).
3. Taguchi, K., Motohashi, H., and Yamamoto, M. *Genes Cells* **16**, 123-140 (2011).
4. Magesh, S., Chen, Y., and Hu, L. *Med. Res. Rev.* **32(4)**, 687-726 (2012).
5. Dinkova-Kostova, A.T., Cory, A.H., Bozak, R.E. , *et al. Cancer Lett.* **245**, 341-349 (2007).
6. Dinkova-Kostova, A.T., Holtzclaw, W.D., Cole, R.N., *et al. Proc. Natl. Acad. Sci. USA* **99(18)**, 11908-11913 (2012).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/11879

Cayman Chemical

Mailing address
1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone
(800) 364-9897
(734) 971-3335

Fax
(734) 971-3640

E-Mail
custserv@caymanchem.com

Web
www.caymanchem.com