PRODUCT INFORMATION



SKQ1 (bromide)

Item No. 19891

CAS Registry No.:	
Formal Name:	[10-(4,5-dimethyl-3,6-dioxo-1,4-
	cyclohexadien-1-yl)decyl]triphenyl-
	phosphonium, monobromide
MF:	$C_{36}H_{42}O_2P \bullet Br$
FW:	617.6
Purity:	≥95%
UV/Vis.:	λ _{max} : 225, 261 nm
Supplied as:	A solution in ethanol and water (1:1) ö
Storage:	-20°C
Stability:	≥2 years
Information represent	s the product specifications. Batch specific analytical results are provided on each certificate of analysis

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

SKQ1 (bromide) is supplied as a solution in ethanol and water (1:1). To change the solvent, simply evaporate the ethanol and water solution under a gentle stream of nitrogen and immediately add the solvent of choice. SKQ1 (bromide) is miscible in ethanol.

Description

SKQ1 (bromide) is a mitochondria-targeted antioxidant that decreases transmembrane potential and production of reactive oxygen species (ROS).¹ SKQ1 prevents neuronal loss and synaptic damage in a rat model of spontaneous Alzheimer's disease, as well as decreases severity of arthritic lesions in rats.^{2,3} SKQ1 slows development of age-related ocular pathologies in murine, porcine, bovine, and canine model systems.⁴ It also prevents acute phenoptosis following rhabdomyolysis, stroke, and myocardial infarction.⁵⁻⁷

References

- 1. Skulachev, V.P. Cationic antioxidants as a powerful tool against mitochondrial oxidative stress. Biochem. Biophys. Res. Commun. 441(2), 275-279 (2013).
- 2. Stefanova, N.A., Muraleva, N.A., Maksimova, K.Y., et al. An antioxidant specifically targeting mitochondria delays progression of Alzheimer's disease-like pathology. Aging (Albany NY) 8(11), 2713-2733 (2016).
- 3. Andreev-Andrievskiy, A.A., Kolosova, N.G., Stefanova, N.A., et al. Efficacy of mitochondrial antioxidant plastoquinonyl-decyl-triphenylphosphonium bromide (SkQ1) in the rat model of autoimmune arthritis. Oxid. Med. Cell. Longev. 8703645 (2016).
- 4. Skulachev, M.V., Severin, F.F., and Skulachev, V.P. Receptor regulation of senile phenoptosis. Biochemistry (Mosc.) 79(10), 994-1003 (2014).
- 5. Plotnikov, E.Y., Chupurkina, A.A., Jankauskas, S.S., et al. Mechanisms of nephroprotective effect of mitochondria-targeted antioxidants under rhabdomyolysis and ischemia/reperfusion. Biochim. Biophys. Acta 1812(1), 77-86 (2011).
- 6. Plotnikov, E.Y., Morosanova, M.A., Pevzner, I.B., et al. Protective effect of mitochondria-targeted antioxidants in an acute bacterial infection. Proc. Natl. Acad. Sci. USA 110(33), E3100-E3108 (2013).
- 7. Skulachev, V.P., Anisimov, V.N., Antonenko, Y.N., et al. An attempt to prevent senescence: A mitochondrial approach. Biochim. Biophys. Acta 1787(5), 437-461 (2009).

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD ANN ARBOR, MI 48108 · USA PHONE: [800] 364-9897 [734] 971-3335 FAX: [734] 971-3640 CUSTSERV@CAYMANCHEM.COM WWW.CAYMANCHEM.COM

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFFTY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/13/2022