Catalog # 10-3204

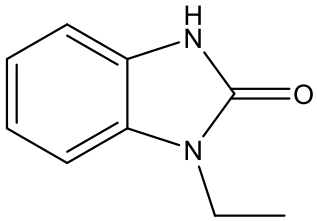
1-EBIO

CAS# 10045-45-1

1-Ethyl-1,3-dihydro-2H-benzimidazol-2-one

1-Ethylbenzimidazolinone

Lot # S104006



A direct activator of small-conductance Ca^{2+}-activated K^+ channels (SK) which dose-dependently relaxes rat mesenteric vessels.[1] Reverses ischemia-induced cognitive impairment[2] and displays neuroprotective effects in ischemia-induced neuronal cell death[3]. Induces embryonic stem cell differentiation into cardiomyocytes and enrichment of pacemaker-like cells.[4] Induces production of superoxide and hydrogen peroxide in neutrophils with subsequent apoptosis.[5]

1) Adeagbo et al. (1999), *1-Ethyl-2-benzimidazolinone stimulates endothelial K(Ca) channels and nitric oxide formation in rat mesenteric vessels*; Eur. J. Pharmacol., **379** 151
2) Orfila *et al*. (2014), *Increasing small conductance Ca2+-activated potassium channel activity reverses ischemia-induced impairment of long-term potentiation*; Eur. J. Neurosci., **40** 3179
3) Allen *et al*. (2011), *SK2 channels are neuroprotective for ischemia-induced neuronal cell death*; J. Cereb. Blood Flow Metab., **31** 2302
4) Muller *et al*. (2012), *Ca2+ activated K channels-new tools to induce cardiac commitment from pluripotent stem cells in mice and men*; Stem Cell Rev., **8** 720
5) Fay et al. (2006), *SK channels mediate NADPH oxidase-independent reactive oxygen species production and apoptosis in granulocytes*; Proc. Natl. Acad. Sci. USA, **103** 17548

PHYSICAL DATA

Molecular Weight:	162.19
Molecular Formula:	$C_9H_{10}N_2O$
Purity:	98% by HPLC
	NMR: (Conforms)
Solubility:	Soluble in DMSO (up to 50 mg/ml) or in Ethanol (up to 30 mg/ml)
Physical Description:	Crystalline solid
Storage and Stability:	Store as supplied desiccated at room temperature for up to 1 year from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 3 months.

Focus Biomolecules LLC 400 Davis Drive, Suite 600 Plymouth Meeting PA 19462

www.focusbiomolecules.com