1-EBIO

K^+ channel activator

1-EBIO is a potent activator of calcium-activated potassium (KCa) channels, specifically targeting small and intermediate conductance KCa channels. It has an EC50 of 490 µM in T84 human carcinoma cells.

Key features and applications include:

- **High Selectivity:** Activates KCa channels with high specificity.
- **Potency:** Demonstrates strong activation with an EC50 of 490 µM.
- **Stimulate Cl^- Secretion:** Induces a large and sustained trans-epithelial Cl- secretory response across T84 monolayers.
- **Promote Hyperpolarization:** Causes hyperpolarization in aortic valve endothelial cells to the same magnitude as acetylcholine.
- **Enhance Stem Cell Differentiation:** Promotes differentiation of embryonic stem cells into cardiomyocytes.

Relevant disease states include:

- **Cystic Fibrosis:** Enhances residual function of mutant CFTR in rectal biopsies from cystic fibrosis patients.
- **Cardiovascular Diseases:** Induces hyperpolarization and nitric oxide formation in endothelial cells, which can be beneficial in cardiovascular research.
- **Neuroprotection:** Increases small conductance Ca^{2+}-activated potassium channel activity, which has neuroprotective effects in ischemia-induced neuronal cell death.

- GMP format available

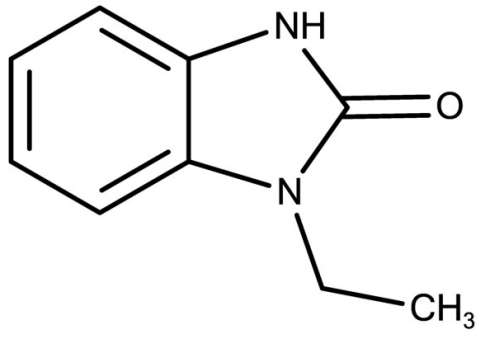
Ordering Information

Order Online »

ENZ-CHM358-0050	50mg

Manuals, SDS & CofA

View Online »

NH O N CH3	

Handling & Storage

Use/Stability	As indicated on product label or CoA when stored as recommended. Solutions in DMSO or ethanol may be stored at -20°C for up to 3 months.
Handling	Keep container tightly closed in a dry and well-ventilated place.
Short Term Storage	Ambient
Long Term Storage	Ambient
Shipping	Ambient Temperature

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	1-Ethyl-1,3-dihydro-2H-benzimidazol-2-one, 1-Ethylbenzimidazolinone, 1-Ethyl-2-benzimidazolinone
Appearance	Crystalline solid.
CAS	10045-45-1
Couple Target	Potassium channel
Couple Type	Activator
Formula	$C_9H_{10}N_2O$
Identity	Determined by NMR.
MW	162.19
Purity	≥98% (HPLC)
Solubility	Soluble in DMSO (up to 50 mg/ml) or in ethanol (up to 30 mg/ml).

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