1-EBIO
Item No. 14575

CAS Registry No.: 10045-45-1
Formal Name: 1-ethyl-1,3-dihydro-2H-benzimidazol-2-one
Synonym: 1-Ethylbenzimidazolinoine
MF: C9H8N2O
FW: 162.2
Purity: ≥98%
Stability: ±2 years at -20°C
Supplied as: A crystalline solid
UV/Vis: λmax 229, 285 nm

Laboratory Procedures
For long term storage, we suggest that 1-EBIO be stored as supplied at -20°C. It should be stable for at least two years.

1-EBIO is supplied as a crystalline solid. A stock solution may be made by dissolving the 1-EBIO in the solvent of choice. 1-EBIO is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of 1-EBIO in ethanol is approximately 30 mg/ml and approximately 100 mg/ml in DMSO and DMF.

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

1-EBIO is an activator of Ca2+-sensitive K+ channels (EC50 = 490 µM in T84 human carcinoma cells). This action is sensitive to the neurotoxin charybdotoxin (Ki = 3.5 nM). In mouse colonic epithelia, 1-EBIO also activates cAMP-sensitive K+ channels, a response this is inhibited by 293B. In this type of epithelium, but not mouse nasal epithelia, 1-EBIO activates both types of channels, resulting in large Cl- secretory currents. It also activates the human intermediate conductance Ca2+-activated K+ channel (EC50 = 74 µM). 1-EBIO is currently used to study the role of these types of K+ channels in diverse physiological functions.

References

Related Products
For a list of related products please visit: www.caymanchem.com/catalog/14575

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY, NOT FOR ADMINISTRATION TO HUMANS, NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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For further details, please refer to our Warranty and Limitation of Remedy located on our website and in our catalog.

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