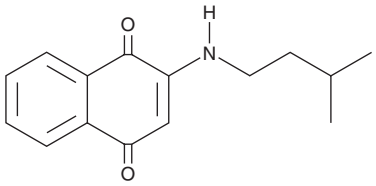
PRODUCT INFORMATION

2-(Isopentylamino)naphthalene-1,4-dione

Item No. 31107

CAS Registry No.: 1607447-79-9
Formal Name: 2-[(3-methylbutyl)amino]-1,4-naphthalenedione
MF: $C_{15}H_{17}NO_2$
FW: 243.3
Purity: ≥98%
UV/Vis.: λ_{max}: 232, 271 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

2-(Isopentylamino)naphthalene-1,4-dione is supplied as a crystalline solid. A stock solution may be made by dissolving the 2-(isopentylamino)naphthalene-1,4-dione in the solvent of choice, which should be purged with an inert gas. 2-(Isopentylamino)naphthalene-1,4-dione is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 2-(isopentylamino)naphthalene-1,4-dione in ethanol is approximately 20 mg/ml and approximately 30 mg/ml in DMSO and DMF.

2-(Isopentylamino)naphthalene-1,4-dione is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, 2-(isopentylamino)naphthalene-1,4-dione should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. 2-(Isopentylamino)naphthalene-1,4-dione has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

2-(Isopentylamino)naphthalene-1,4-dione is a vitamin K analog.[1] It inhibits spasms induced by pentylenetetrazole (PTZ; Item No. 18682) and tonic hindlimb extension induced by maximal electroshock (MES) in mice (ED_{50}s = 349.2 and 108.1 mg/kg, respectively). It also protects mice against seizures in the 6 Hz psychomotor seizure test (ED_{50}s = 152.7 and 263.7 mg/kg at stimulus intensities of 32 and 44 mA, respectively).

Reference

1. Li, X., Himes, R.A., Prosser, L.C., *et al.* Discovery of the first vitamin K analogue as a potential treatment of pharmacoresistant seizures. *J. Med. Chem.* **63(11)**, 5865-5878 (2020).

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