

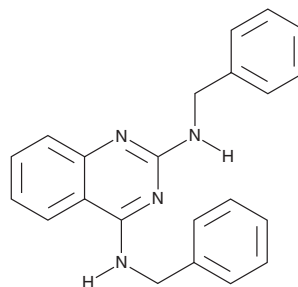
PRODUCT INFORMATION



DBeQ

Item No. 15318

CAS Registry No.: 177355-84-9
Formal Name: N²,N⁴-bis(phenylmethyl)-2,4-quinazolinediamine
Synonyms: N,N'-Dibenzylquinazoline-2,4-diamine, JRF 12
MF: C₂₂H₂₀N₄
FW: 340.4
Purity: ≥98%
UV/Vis.: λ_{max}: 238, 281, 340 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

DBeQ is supplied as a crystalline solid. A stock solution may be made by dissolving the DBeQ in the solvent of choice, which should be purged with an inert gas. DBeQ is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of DBeQ in ethanol is approximately 1.4 mg/ml and approximately 25 mg/ml in DMSO and DMF.

DBeQ is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, DBeQ should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. DBeQ 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

The ATPase p97 is an ubiquitin-selective chaperone known to play a critical role in the degradation of misfolded membrane and secretory proteins and has been linked to various cellular processes that require unfolding and disassembly of protein complexes.¹ DBeQ is a selective, reversible, and ATP-competitive inhibitor of the ATPase p97 ($K_i = 3.2 \mu\text{M}$; $\text{IC}_{50} = 1.5 \mu\text{M}$).² It does not exhibit activity when tested against a panel of 170 protein kinases at concentrations as high as $15 \mu\text{M}$.² At $10 \mu\text{M}$ it blocks endoplasmic reticulum-associated degradation, impairing the autophagy pathway and promoting the activation of caspase-3 and -7 in cancer cells.²

References

1. Chou, T.F. and Deshaies, R.J. Development of p97 AAA ATPase inhibitors. *Autophagy* **7(9)**, 1091-1092 (2011).
2. Chou, T.F., Brown, S.J., Minond, D., *et al.* Reversible inhibitor of p97, DBeQ, impairs both ubiquitin-dependent and autophagic protein clearance pathways. *Proc. Natl. Acad. Sci. USA* **108(12)**, 4834-4839 (2011).

WARNING

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

SAFETY 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.

WARRANTY AND LIMITATION OF REMEDY

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.

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