1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: \( C_{16}H_{17}N_{3}O_{3}S\cdot CH_{3}SO_{3}H \)

Batch Molecular Weight: 427.49

Physical Appearance: White crystalline solid

Solubility: DMSO to 100 mM

Storage: Store at RT

2. ANALYTICAL DATA

TLC: \( R_f = 0.5 \) (Dichloromethane:Methanol:Ammonia soln. [85:15:1])

Melting Point: Between 175 - 177°C

HPLC: Shows 99.8% purity

\(^1\)H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis: Carbon Hydrogen Nitrogen

Theoretical 47.76 4.95 9.82

Found 47.8 4.88 9.86
**Product Name:** KB-R7943 mesylate

**CAS Number:** 182004-65-5

**IUPAC Name:** 2-[2-[4-(4-Nitrobenzyloxy)phenyl]ethyl]isothiourea mesylate

**Description:**
Potent, selective inhibitor of the reverse mode of the Na+/Ca2+ exchanger (IC50 = 0.7 μM). Also inhibits the mitochondrial Ca2+ uniporter (MCU; IC50 = 5.5 μM). Does not affect Na+-dependent transport systems or ionotropic glutamate receptors.

**Physical and Chemical Properties:**
- **Batch Molecular Formula:** C16H17N2O6S.CH2SO3H
- **Batch Molecular Weight:** 427.49
- **Physical Appearance:** White crystalline solid
- **Minimum Purity:** >99%

**Storage:** Store at RT

**Solubility & Usage Info:**
DMSO to 100 mM

**Stability and Solubility Advice:**
Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can offer a general guide. Our standard recommendations are:

- **SOLIDS:** Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.
- **SOLUTIONS:** We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

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Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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