Product Name: Flumazenil

CAS Number: 78755-81-4

IUPAC Name: 8-Fluoro-5,6-dihydro-5-methyl-6-oxo-4H-imidazo[1,5-a][1,4]benzodiazepine-3-carboxylic acid, ethyl ester

1. PHYSICAL AND CHEMICAL PROPERTIES

   Batch Molecular Formula: \( \text{C}_{15}\text{H}_{14}\text{FN}_{3}\text{O}_{3} \)
   Batch Molecular Weight: 303.29
   Physical Appearance: White solid
   Solubility: DMSO to 25 mM
   Storage: Store at +4°C
   Batch Molecular Structure:

2. ANALYTICAL DATA

   Melting Point: Between 199 - 201°C
   HPLC: Shows 99.8% purity
   \(^1\)H NMR: Consistent with structure
   Mass Spectrum: Consistent with structure
   Microanalysis:

<table>
<thead>
<tr>
<th></th>
<th>Theoretical</th>
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<tr>
<td>Carbon</td>
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<tr>
<td>Nitrogen</td>
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</tbody>
</table>

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use
Product Name: Flumazenil  
Catalog No.: 1328  
Batch No.: 4

CAS Number: 78755-81-4  
IUPAC Name: 8-Fluoro-5,6-dihydro-5-methyl-6-oxo-4H-imidazo[1,5-a][1,4]benzodiazepine-3-carboxylic acid, ethyl ester

Description:
Benzodiazepine antagonist, non-selective for $\alpha_1$, $\alpha_2$, $\alpha_3$ or $\alpha_5$-containing GABA$_\text{A}$ receptors. Centrally active upon systemic administration in vivo. Also inhibits repressor element-1 silencing transcription factor (REST) by targeting degradation.

Physical and Chemical Properties:
Batch Molecular Formula: C$_{15}$H$_{14}$FN$_3$O$_3$
Batch Molecular Weight: 303.29
Physical Appearance: White solid
Minimum Purity: $\geq$99%

Storage: Store at +4°C

Solubility & Usage Info:
DMSO to 25 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 only 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:
Atack et al (1999) Regional differences in the inhibition of mouse in vivo [H]Ro 15-1788 binding reflect selectivity for $\alpha_1$ versus $\alpha_2$ and $\alpha_3$ subunit-containing GABA$_\text{A}$ receptors. Neuropsychopharmacology 20 255. PMID: 10063485.