

Certificate of Analysis

www.tocris.com

Product Name: 3-Aminotyrosine

Catalog No.: 7370

Batch No.: 1

CAS Number: 23279-22-3

EC Number: 245-552-5

IUPAC Name: 3-Amino-L-tyrosine dihydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₉H₁₂N₂O₃·2HCl·H₂O

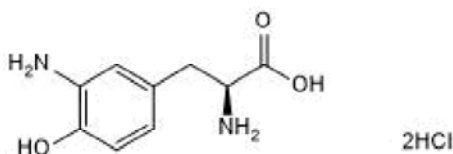
Batch Molecular Weight: 287.14

Physical Appearance: White solid

Solubility: water to 100 mM
DMSO to 100 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 99.6% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: [α]_D = -2 (Concentration = 2, Solvent = Water)

Microanalysis:

	Carbon	Hydrogen	Nitrogen	Chlorine
Theoretical	37.65	5.62	9.76	24.69
Found	37.55	5.52	9.52	24.34

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

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IUPAC Name: 3-Amino-L-tyrosine dihydrochloride

Description:

Unnatural amino acid that induces red shift when incorporated into fluorescent proteins and fluorescent protein-based biosensors. Causes spontaneous and efficient red shift of GFP in HEK293T cells, shifting excitation and emission maxima by 56 and 95 nm respectively. Induces red shift in a range of fluorescent proteins containing tyrosine-derived chromophores, including teal fluorescent mTFP1, yellow fluorescent Citrine, and circularly permuted YFP and GFP. Also induces red-shift in fluorescent protein-based biosensors, including iGluSnFR (a glutamate sensor), iGABASnFR (a GABA sensor), dLight1.2 (a dopamine sensor) and iATPSnFR1.1 (an ATP se... Please see product datasheet on www.tocris.com for full description.

Physical and Chemical Properties:

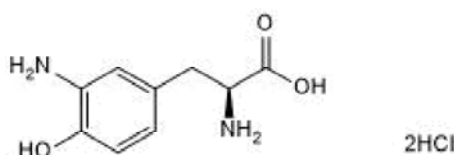
Batch Molecular Formula: C₉H₁₂N₂O₃.2HCl.H₂O

Batch Molecular Weight: 287.14

Physical Appearance: White solid

Minimum Purity: ≥98%

Batch Molecular Structure:



References:

Zhang & Ai (2020) A general strategy to red-shift green fluorescent protein-based biosensors. *Nat.Chem.Biol.* **16** 1434. PMID: 32929278.

Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

water to 100 mM

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 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.

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