Synaptic Systems

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NP-EGTA

Cat.No. 510 006; , 1 mg

Data Sheet

Reconstitution/ Storage	1 mg o-nitrophenyl EGTA tetrapotassium salt dissolved in 50 µl H_2O (= 30.5 mM). HPLC analysis Spin down and store at -20° C. Protect material from light always.
Name	6,9-Dioxa-3,12-diazatetradecanedioic acid, 3,12-bis(carboxymethyl)-4-(2-nitrophenyl)-tetrapotassium salt. MSDS
Molecular formula	$C_{20}H_{23}K_4N_3O_{12}$. chemical structure
Molecular weight	653.81
Extinction coefficient	ε = 5.52 x 10^3 M^{-1} x cm^{-1} at 260 nm in Ca^{2+} free 40 mM HEPES / 100 mM KCl buffer at pH 7.2.
Photolysis quantum yield	0.23

TO BE USED IN VITRO / FOR RESEARCH ONLY
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Calcium is the most important signalling molecule inside cells. It is involved in the regulation of neurotransmission, gene-expression, muscle contraction and many more.
o**-nitrophenyl EGTA** (**NP-EGTA**) is a photolabile Ca^{2+} chelator that is highly specific for Ca^{2+} ions and unaffected by physiological Mg^{2+} concentrations. Photolysis by illumination with UV-light decreases the affinity of NP-EGTA for Ca^{2+} ions ~ 12,500-fold and the Ca^{2+} ions become physiologically available. By this approach regulatory effects of calcium on cellular processes can be studied.

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MATERIAL SAFETY DATA SHEET

o-nitrophenyl EGTA, tetrapotassium salt (NP-EGTA)

1. Product Identification / Composition / Information on Ingredients

CAS Number: 238073-40-0
Name: 6,9-Dioxa-3,12-diazatetradecanedioic acid, 3,12-bis(carboxymethyl)-4-(2-nitrophenyl)-tetrapotassium salt
Molecular Formula: $C_{20}H_{23}K_4N3O_{12}$
Molecular Weight: 653.81

2. Hazards Identification

Emergency Overview: Caution - substance not fully tested. We recommend handling all chemicals with caution.
Potential Health Effects: Not determined
Inhalation: Not determined
Ingestion: Not determined
Skin Contact: Not determined
Eye Contact: Not determined
Chronic Exposure: Not determined
Target Organs: Not determined

3. First Aid Measures

Potentially harmful. Avoid prolonged or repeated exposure. Wash thoroughly after handling. If eye or skin contact occurs, wash affected area with water for 15 minutes and seek medical advice.
If inhaled, move to fresh air and seek medical advise. If swallowed, seek medical advise.

4. Fire Fighting Measures

Use chemical powder or appropriate foam extinguisher

5. Accidental Release Measure

Use appropriate protective equipment and methods to clean up spilled substances. Absorb spill onto appropriate material. Collect and dispose of all waste in accordance with applicable laws.

6. Handling and Storage

Store at = -20°C. **Protect material from light at all times.**

7. Exposure Controls / Personal Protection

Wear appropriate protective gloves, clothing and eyewear. Follow safe laboratory practices
ACGIH/OSHA Permissible Exposure Limit Data: Not determined

8. Physical and Chemical Properties

Appearance: Liquid; aqueous solution
Odor: No information found
Solubility in Water: High
Specific Gravity: No information found
pH: 12
Boiling Point: No information found
Melting Point: No information found
Flash Point: No information found
Vapor Pressure: No information found

9. Stability and Reactivity

Thermal Decomposition: No decomposition if used according to specifications.
Dangerous Reactions: No dangerous reactions identified.
Dangerous Products of Decomposition: None identified

10. Toxicological Information

RTECS Number: None known
Toxicity: No data on toxicity of this product found.
Health Hazards: No reported health hazards for this product found.
Carcinogenicity: Not listed by NTP, IARC or OSHA.

11. Ecological Information

Do not allow product to reach ground water, water course, or sewage system.

12. Disposal Considerations

Dispose of according to local, state, or national laws and regulations.

13. Transport Information

Not regulated. The product can be shipped as aqueous solution at ambient temperatures without loss of stability/activity.

14. Regulatory Information

US Toxic substances Control Act (TSCA): Not listed
EEC EINECS Number: Not identified
EEC Risk Statements: Not determined
Other Country Regulations: None identified

15. Other Information

This material is only for research purposes and is not required to appear on the TSCA inventory. It is not intended for food, drug, household, agricultural and cosmetic use. Its use must be supervised by a technically qualified individual experienced in handling potentially hazardous chemicals. The above information is correct to the best of our knowledge. Users should make independent decisions regarding completeness of the information based on all sources available. Synaptic Systems GmbH shall not be held liable for any damage resulting from handling or contact with the above product.

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