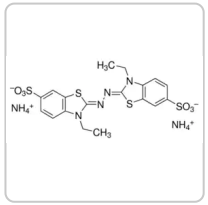

All Photos (1)

Documents

SDS

COO/COA

Specification Sheet

More Documents

A9941 ▶ Sigma-Aldrich

2,2′-Azino-bis(3-ethylbenzothiazoline-6-sulfonic acid) diammonium salt

(0)

tablet, 10 mg substrate per tablet

Synonym(s):
AzBTS-$(NH_4)_2$, Diammonium 2,2′-azino-bis(3-ethylbenzothiazoline-6-sulfonate)

Empirical Formula (Hill Notation):
$C_{18}H_{24}N_6O_6S_4$

CAS Number:	30931-67-0	**Molecular Weight:**	548.68
Beilstein:	7329461	**EC Number:**	250-396-6
MDL number:	MFCD00010404	**PubChem Substance ID:**	24891410

SKU	Pack Size	Availability	Price	Quantity
A9941-5TAB	5 TABLETS	Only 1 left in stock (more on the way) Details...	€68.90	− +
A9941-50TAB	50 TABLETS	Only 2 left in stock (more on the way) Details...	€357.00	− +
A9941-100TAB	100 TABLETS	Only 3 left in stock (more on the way) Details...	€612.00	− +

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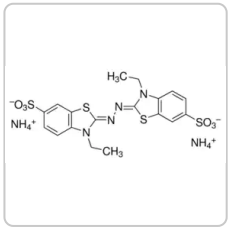
RECOMMENDED PRODUCTS



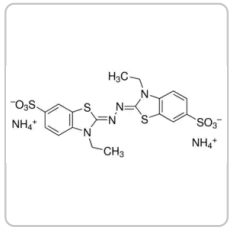
Sigma-Aldrich

A1888

2,2′-Azino-bis(3-ethylbenzothiazoline-6-sulfonic acid) diammonium salt

≥98% (HPLC)

View Price and Availability



Sigma-Aldrich

11557

2,2′-Azino-bis(3-ethylbenzothiazoline-6-sulfonic acid) diammonium salt

≥98% (HPLC)

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PROPERTIES

Quality Level	**200**
form	tablet
solubility	deionized water: 100 mL
storage temp.	room temp
SMILES string	[NH4+].[NH4+].CCN1C(\Sc2cc(ccc12)S([O-])(=O)=O)=N\N=C3/Sc4cc(ccc4N3CC)S([O-])(=O)=O

InChI	1S/C18H18N4O6S4.2H3N/c1-3-21-13-7-5-11(31(23,24)25)9-15(13)29-17(21)19-20-18-22(4-2)14-8-6-12(32(26,27)28)10-16(14)30-18;;/h5-10H,3-4H2,1-2H3,(H,23,24,25)(H,26,27,28);2*1H3/b19-17-,20-18-;;
InChI key	OHDRQQURAXLVGJ-AXMZSLBLSA-N

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Related Categories

Detection Substrates & Enzymes

DESCRIPTION

General description

ABTS mainly used in ELISA (enzyme-linked immunosorbent assay) procedures.
ABTS, 2,2′-Azino-bis(3-ethylbenzthiazoline-6-sulfonic acid), is a chromogenic substrate used:

- For a reaction with laccase or bilirubin oxidase
- For a reaction with peroxidase enzymes: (like HRP for example). ABTS in combination with hydrogen peroxide

A peroxidase reaction of ABTS in the presence of hydrogen peroxide produces a green soluble end product which can be read spectrophotometrically at 405nm. The reaction may be stopped with 1% sodium dodecyl sulfate (SDS).
ABTS, 2,2′-Azino-bis(3-ethylbenzothiazoline-6-sulfonic acid) diammonium salt is light sensitive, and water soluble chemical compound

Application

- 2,2′-Azino-bis(3-ethylbenzothiazoline-6-sulfonic acid) diammonium salt, ABTS, has been used as a substrate in ELISA (enzyme-linked immunosorbent assay).†
- ABTS is also used to measure glucose concentrations in different solutions including blood serum.
- The food industry uses ABTS to measure the antioxidant capacities within different foods.
- Since it is less readily oxidized than TMB and OPD substrates, ABTS is less sensitive for ELISA applications. Thus ABTS has some advantageous over TMB and OPD in cases of large background results
- It is recommended for ELISA (microwell) procedures, not recommended for membrane applications.

2,2′-Azino-bis(3-ethylbenzthiazoline-6-sulfonic acid) is a peroxidase substrate suitable for use in ELISA procedures. This substrate produces a soluble end product that is green in color and can be read spectrophotometrically at 405 nm. The reaction may be stopped with 1% sodium dodecyl sulfate (SDS). Recommended for ELISA (microwell) procedures, not recommended for membrane applications.

Reconstitution

Dissolve 1 tablet in 100 ml of 0.05 M phosphate-citrate buffer, pH 5.0 (Tablets available as Sigma Product No. P4809). Add 25 µl of fresh 30% hydrogen peroxide

SAFETY INFORMATION

Storage Class Code	WGK	Flash Point(F)	Flash Point(C)
11 - Combustible Solids	WGK 3	Not applicable	Not applicable

Personal Protective Equipment
dust mask type N95 (US), **Eyeshields**, **Gloves**

DOCUMENTATION

Certificate of Analysis

Enter Lot Number to search for Certificate of Analysis (COA).

Lot Number

e.g. 023J5431

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Structure Search

SDS

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194434

ABTS™ Chromophore

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P4809

Phosphate-Citrate Buffer

tablet

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PEER REVIEWED PAPERS

Humoral and Cell-Mediated Immune Response in Colostrum from Women Diagnosed Positive for SARS-CoV-2.

Vignesh Narayanaswamy et al.
Breastfeeding medicine : the official journal of the Academy of Breastfeeding Medicine, 16(12), 987-994 (2021-08-13)

Objective: To evaluate the immune response to severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) in colostrum from women who tested positive for the virus. Methods: Between March and September 2020 we obtained bilateral colostrum samples collected on spot cards within

Comparison of chromogens for the determination of horseradish peroxidase as a marker in enzyme immunoassay.

B Porstmann et al.
Journal of clinical chemistry and clinical biochemistry. Zeitschrift fur klinische Chemie und klinische Biochemie, 19(7), 435-439 (1981-07-01)

o-Phenylenediamine, 2,2'-azino-di(3-ethylbenzthiazoline sulphonic acid-6) (ABTS), o-dianisidine and 4-aminoantipyrine were compared as chromogens for the determination of horseradish peroxidase. Highest sensitivity in the determination of horseradish peroxidase-IgG conjugates in dissolved form was obtained with o-phenylenediamine. When these conjugates were used in

Recombinant SARS-CoV-2 Nucleocapsid Protein: Expression, Purification, and Its Biochemical Characterization and Utility in Serological Assay Development to Assess Immunological Responses to SARS-CoV-2 Infection.

Da Di et al.
Pathogens (Basel, Switzerland), 10(8) (2021-08-29)

The SARS-CoV-2 nucleocapsid protein (N) binds a single-stranded viral RNA genome to form a helical ribonucleoprotein complex that is packaged into virion particles. N is relatively conserved among coronaviruses and consists of the N-terminal domain (NTD) and C-terminal domain (CTD)

Development of a feline proinsulin immunoradiometric assay and a feline proinsulin enzyme-linked immunosorbent assay (ELISA): A novel application to examine beta cell function in cats

Kley S, et al.
Domestic Animal Endocrinology, 311-318 (2008)

Collaborative study on a guinea pig serological method for the assay of acellular pertussis vaccines

Winsnes R, et al.
Pharmeuropa Bio & Scientific Notes, 19-32 (2009)

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PROTOCOLS AND ARTICLES

Articles

Colorimetric Alkaline Phosphatase and Peroxidase Substrate Detection Systems

Nitroblue Tetrazolium (NBT) is used with the alkaline phosphatase substrate 5-Bromo- 4-Chloro-3-Indolyl Phosphate (BCIP) in western blotting and immunohistological staining procedures. These substrate systems produce an insoluble NBT diformazan end product that is blue to purple in color and can be...

Protocols

Enzymatic Assay of Alcohol Oxidase (EC 1.1.3.13)

This procedure may be used for all Alcohol Oxidase products. The continuous spectrophotometric rate determination (A405, Light path = 1 cm) is based on the following reactions.

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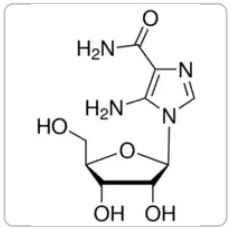

Sigma-Aldrich

A9978

AICAR

≥98% (HPLC), powder

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Sigma-Aldrich

AA0100

Ammonia Assay Kit

sufficient for 100 assays

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