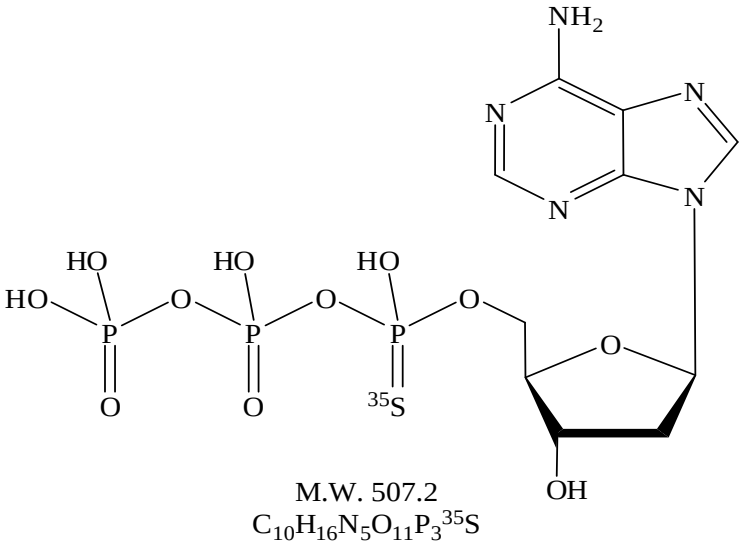
2′ Deoxyadenosine 5′-(α- thio) Triphosphate, [^{35}S]-

Product Number: NEG034H

LOT SPECIFIC INFORMATION

Lot Number:	1024
Specific Activity:	1250 Ci/mmol
	46.25 TBq/mmol
Concentration:	12.5 mCi/ml
	462.5 MBq/ml
	10 µM
Calibration Date:	12-Nov-2024



M.W. 507.2

$C_{10}H_{16}N_5O_{11}P_3{}^{35}S$

PACKAGING: 12.5mCi/ml (462.5 MBq/ml) on the Calibration Date in an aqueous solution containing 10mM Tricine (pH7.6) with 10 mM DTT solution. This product is shipped on dry ice in a plastic container. The lead-free container is non-toxic and environmentally friendly.

STABILITY AND STORAGE: 2′ Deoxyadenosine 5′-(α- thio) Triphosphate, [^{35}S]- should be stored at -20°C or below in its original solvent and at its original concentration. At the recommended storage conditions, the chemical decomposition should not exceed 2% per week. Lot to lot variation may occur, and it is advisable to check purity prior to use. This product will undergo greater decomposition if left at room temperature for long periods. It is recommended that the product remain on ice while in use. The product can be thawed at room temperature or quick-thawed in a 37°C water bath. Multiple thawing and freezing will not affect product purity if care is taken to minimize the time spent at room temperature. Pre-mixing and aliquoting the product is recommended.

HAZARD INFORMATION: WARNING: This product contains a chemical known to the state of California to cause cancer.

QUALITY CONTROL:

Radiochemical Purity: This lot was initially found to be >99% when purified and >95% on day of shipment when determined by the following analytical HPLC method using a C-18 column. Elution is isocratic by a mixture of 70% Solvent A (20mM potassium phosphate, 20mM phosphoric acid containing 10mM tetrabutylammonium hydroxide) and Solvent B (30% methanol).

Biological Testing: Random - Hexamer Primed Synthesis; 3′- End Labeling

PREPARATIVE PROCEDURE: Each lot has been purified by HPLC using an anion exchange resin eluting with Triethylammoniumbicarbonate. The purified nucleotide will be in the triethylammonium salt form. Consistently high quality - Synthesized, diluted, and packaged using state of the art automation.

SAFE HANDLING: Open vials and manipulations of ^{35}S should be done in a well-ventilated hood or other ventilated enclosure. Small amounts of a volatile ^{35}S- labeled decomposition product are formed during storage

and use (<0.01% per week) particularly at elevated temperatures. Removal of solvents is best performed under vacuum conditions, below 25°C. A radiation protection specialist should be consulted for specific applications.

DISPOSAL: Hold for decay; specific regulations should be addressed with your radiation safety officer.

SPECIAL INFORMATION: Visit www.revvity.com to use our online Radioactive Decay Calculator.

Specific Activity Before Calibration Date

The specific activity is specified as of the calibration date. This must be taken into consideration when calculating concentration in mass-dependent applications. The specific activity on any day prior to the calibration date can be calculated using the formula:

$$SA = \frac{SA\ cal.}{D_F + \frac{SA\ cal.\ (1\text{-}D_F)}{SA\ Theo}}$$

Specific Activity After Calibration Date

The specific activity on any day after the calibration date can be calculated using the formula:

$$SA = \frac{D_F}{\frac{1}{SA\ cal.} - \frac{(1\text{-}D_F)}{SA\ Theo}}$$

Where:

SA = Specific Activity expressed as Ci/mmol

SA cal = Specific Activity on the calibration date.

D_F = Fraction of current radioactivity that will remain on the calibration date (from the decay chart)
For example, for a date 8 days after the calibration date D_F = 0.9385.

SA Theo = 1498 Ci/mmol for the theoretical specific activity of carrier free ^{35}S.

SULFUR-35 DECAY TABLE HALF LIFE= 87.4 DAYS

days	0	1	2	3	4	5	6	7	8	9
0	1.0000	0.9921	0.9843	0. 9765	0.9688	0.9611	0.9535	0.9490	0.9385	0.9311
10	0.9238	0.9165	0.9092	0.9020	0.8949	0.8878	0.8808	0.8740	0.8670	0.8601
20	0.8533	0.8466	0.8399	0.8333	0.8267	0.8201	0.8137	0.8072	0.8009	0.7945
30	0.7885	0.7820	0.7758	0.7697	0.7636	0.7576	0.7516	0.7457	0.7398	0.7339

To use the decay table above, find the number of days in the top and left hand columns of the chart, then find the corresponding decay factor. To obtain a precalibration number, divide by the decay factor. For a postcalibration number, multiply by the decay factor.

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