EasyTag™ Express Protein Labeling Mix, [^{35}S]-

Product Number: NEG772

LOT SPECIFIC INFORMATION

Lot Number: 03044

Specific Activity:
L-[^{35}S] Methionine: 43.5 TBq/mmol (1175.0 Ci/mmol)
L-[^{35}S] Cysteine: 39.8 TBq/mmol (1075.0 Ci/mmol)

Concentration:
Total Hydrolysate: 407.0 MBq/ml (11.0 mCi/ml)
L-[^{35}S] Methionine: 296.0 MBq/ml (8.0 mCi/ml)
L-[^{35}S] Cysteine: 88.8 MBq/ml (2.4 mCi/ml)

Calibration Date: 29-Mar-2024

CAUTION: The package size of NEG072 refers to the total radioactivity due to L-[^{35}S] methionine, L-[^{35}S] cysteine and other ^{35}S components. Pre-calibration significantly increases the actual mCi/ml and mCi/vial. Refer to the Product Specifications section for distribution of labeled components.

PACKAGING: Stabilized aqueous solution.

PRODUCT SPECIFICATIONS: NEG772, EXPRESS is prepared directly from the hydrolysate of E. coli grown in the presence of carrier-free [^{35}S] sulfate with a proprietary stabilizer added. As determined by amino acid analysis, the distribution of ^{35}S-labeled components is routinely 73% L-[^{35}S] methionine and 22% L-[^{35}S] cysteine.

STABILITY AND STORAGE:

- The rate of decomposition of NEG772 Easy Tag™ EXPRESS is approximately 1% per week when stored at 4°C.
- The compound may be stored in a refrigerator during frequent use, and it may be exposed to room temperature for several days without significant loss of purity or function. If used infrequently, freezing is recommended to minimize the risk of microbial contamination.

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

PRODUCT APPLICATION: NEG772 is intended solely for use in eukaryotic or bacterial cell labeling studies. It is not recommended or warranted for use in cell-free protein translation. The use of NEG772 in the latter application provides irreproducible experimental results, with significant variation in both ^{35}S-amino acid incorporation and background levels.

SAFE HANDLING: Because this product has been stored at -80°C, it is possible that pressure may develop in the vial during the thawing process. In addition, volatile ^{35}S-labeled decomposition products are generated at a rate of ~0.01% per week. We recommend that prior to opening, vials are first vented in a fume hood using the following procedure:

- Slide aside the dust cover on the cap to expose the septum.
- Pierce the septum with a cotton-plugged syringe needle or charcoal trap (NENTM NEX-033T), taking care that the tip does not come into contact with the product.

▪If the product is frozen, quickly thaw at room temperature or in a 37° C water bath. Any pressure developed will vent through the syringe needle.
▪Remove the needle and dispose of as contaminated equipment.

When used for *in vivo* labeling experiments, we recommend that specific steps be taken to minimize incubator and water bath contamination. We suggest using a shallow tray of activated charcoal, charcoal sticks or charcoal filter units to trap ^{35}S volatiles and reduce contamination.

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

Decay of ^{35}S (physical half-life, 87.4 days):

DECAY FACTORS

Days BEFORE Assay Date	0	1	2	3	4	5	6	7	8	9
30	1.269	1.279	1.289	1.299	1.309	1.320	1.330	1.341	1.352	1.362
20	1.172	1.181	1.191	1.200	1.210	1.219	1.229	1.239	1.249	1.259
10	1.083	1.091	1.100	1.109	1.117	1.135	1.135	1.144	1.153	1.163
0	1.000	1.008	1.016	1.024	1.032	1.049	1.049	1.057	1.066	1.074

Days AFTER Assay Date	0	1	2	3	4	5	6	7	8	9
0	1.000	0.992	0.984	0.976	0.969	0.961	0.954	0.946	0.939	0.931
10	0.924	0.916	0.909	0.902	0.895	0.888	0.881	0.874	0.867	0.860
20	0.853	0.847	0.840	0.833	0.827	0.820	0.814	0.807	0.801	0.795
30	0.788	0.782	0.776	0.770	0.764	0.758	0.752	0.746	0.740	0.734

The specific activity at time t (SA_t) may be calculated, using the following equation, from the specific activity at the calibration date (SA_o) and the decay factor (f) given above.

$$SA_t = \frac{f}{1/SA_o - (1-f)/1494}$$

REFERENCE:
Rubin, I.B., and Goldstein, G., (1970) Anal. Biochem. 33, 244-254.

RELATED PRODUCTS:

NEG009A	Methionine, L-[^{35}S]- Premium Stabilized Grade
NEG009C	Methionine, L-[^{35}S]- High concentration.
NEG009T	Methionine, L-[^{35}S]- Translation Grade
NEG022T	Cysteine, L-[^{35}S]-
NEX033T	Charcoal Trap for NENSure™ vial.

Revvity, Inc.
940 Winter Street
Waltham, MA 02451 USA
(800) 762-4000
www.revvity.com
For a complete listing of our global offices, visit www.revvity.com