

**[<sup>125</sup>I]-PACAP27**

Product Number: NEX294

**LOT SPECIFIC INFORMATION**

CALCULATED AS OF: 13-May-2024

LOT NUMBER: GC61440

SPECIFIC ACTIVITY: 81.4 TBq/mmol  
 2200 Ci/mmol  
 25 MBq/μg  
 673 μCi/μg

**Package Size Information**

Package Size as of 14-Jun-2024
185 kBq 5 μCi
925 kBq 25 μCi

RADIOCHEMICAL PURITY: ≥ 90%

MOLECULAR WEIGHT: ~3270

**PACKAGING:** [<sup>125</sup>I]-PACAP27 is lyophilized from a solution containing 0.05M sodium acetate, pH 4 with 0.05M N-acetylmethionine, 5% sucrose, 0.05M ascorbic acid and 0.25% BSA. It is shipped on dry ice in Sigma-Cote™ treated vials.

**STABILITY AND STORAGE:** The lyophilized [<sup>125</sup>I]-PACAP27 should be stored at -20°C or lower. Following reconstitution with distilled water to a concentration of approximately 25 μCi/ml on calibration date, aliquot and store at -20°C. Under these conditions the product is stable and usable in radioimmunoassays and receptor assays for at least four weeks after fresh lot date. NOTE: Product may degrade 10% per day when reconstituted and stored at 4°C. Therefore, store reconstituted product at -20°C and minimize freeze-thaws.

**SPECIAL INFORMATION:** [<sup>125</sup>I]-PACAP27 sticks to glass. We recommend using plasticware or Sigma-Cote™ treated glassware to minimize this problem.

**SPECIFIC ACTIVITY:** The initial specific activity of [<sup>125</sup>I]-PACAP27 is 2200 Ci/mmol (81 TBq/mmol), 673 μCi/μg (25 MBq/μg). Preparative HPLC separates unlabeled PACAP27 from [<sup>125</sup>I]-PACAP27. Upon decay, [<sup>125</sup>I]-PACAP27 undergoes decay catastrophe and the specific activity remains constant with time. However, it is not known what molecular fragments are generated from the decay event or what functional activity these fragments may have in different assays. References on <sup>125</sup>I decay and decay catastrophe of <sup>125</sup>I labeled compounds are available.<sup>1-5</sup>

**RADIOCHEMICAL PURITY:** Initially greater than 90% radiochemically pure as determined by HPLC.

**PREPARATIVE PROCEDURE:** PACAP27 (synthetic, human), is radioiodinated with no carrier added <sup>125</sup>I using a lactoperoxidase procedure and is purified by reversed phase HPLC. This method predominantly labels tyrosine residues.

**AVAILABILITY:** [<sup>125</sup>I]-PACAP27 is routinely available from stock and is prepared fresh and packaged for shipment  
 NEX294-R-REV01

on the second Monday of each month. Please inquire for larger package sizes.

**HAZARD WARNING:** This product contains a chemical (s) known to the state of California to cause cancer. This product also contains a component which is harmful by contact, ingestion and inhalation. It is irritating to the eyes, skin and respiratory tract.

## REFERENCES:

1. Doyle, V.M., Buhler, F.R., Burgisser, E., *Eur. J. Pharm.* 99 353 (1984).
2. Schmidt, J., *J. Biol. Chem.* 259 1160 (1984).
3. Loring, R.H., Jones, S.W., Matthews-Bellinger, J., Salpeter, M.M., *J. Biol. Chem.* 257 1418 (1982).
4. Berridge, M.S., Jiang, V.W., Welch, M.J., *Rad. Res.* 82 467 (1980).
5. Charlton, D.E., *Rad. Res.* 107 163 (1986).
6. Arimura, A., *Regulatory Peptides* 37 287-302 (1992).
7. Arimura, A., *TEM* 3 No. 8 288 (1992).
8. Arimura, A., *Endocrinology* 129 No. 5 2787 (1991).
9. Masuo, Y., Ohtaki, T., Masuda, Y., Nagai, Y., Suno, M., Tsuda, M., Fujino, M., *Neuroscience Letters* 126 103-6 (1991).

## IODINE-125 DECAY CHART HALF LIFE=60 days

Radiations Gamma 35.5 keV (7%) , X-ray K alpha 27 KeV (112%), K beta 31 keV (24%)

DAYS	0	2	4	6	8	10	12	14	16	18
0	1.000	0.977	0.955	0.933	0.912	0.891	0.871	0.851	0.831	0.812
20	0.794	0.776	0.758	0.741	0.724	0.707	0.691	0.675	0.66	0.645
40	0.630	0.616	0.602	0.588	0.574	0.561	0.548	0.536	0.524	0.512
60	0.500	0.489	0.477	0.467	0.456	0.445	0.435	0.425	0.416	0.406
80	0.397	0.388	0.379	0.37	0.362	0.354	0.345	0.338	0.33	0.322
100	0.315	0.308	0.301	0.294	0.287	0.281	0.274	0.268	0.262	0.256
120	0.250	0.244	0.239	0.233	0.228	0.223	0.218	0.213	0.208	0.203

To obtain the correct radioactive concentration or amount for a date before the calibration date: divide by the decay factor corresponding to the number of days before the calibration date. To obtain the correct radioactive concentration or amount for a date after the calibration date: multiply by the decay factor corresponding to the number of days after the calibration date.

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