[125I]-Pancreatic Polypeptide (human)

Product Number: NEX315

Ala-Pro-Leu-Glu-Pro-Val-Tyr-Pro-Gly-Asp-Asn-Ala-Thr-Pro-Glu-Gln-Met-Ala-Gln-Tyr-Ala-Ala-Asp-Leu-Arg-Arg-Tyr-Ile-Asn-Met-Leu-Thr-Arg-Pro-Arg-Tyr-NH_2

LOT SPECIFIC INFORMATION:

CALCULATED AS OF: 25-Mar-2024

LOT NUMBER: GX42640

SPECIFIC ACTIVITY:
81.4 TBq/mmol
2200 Ci/mmol
19.5 MBq/µg
526 µCi/µg

Package Size Information

Package Size as of 26-Apr-2024
370 kBq 10 µCi
1.85 MBq 50 µCi

RADIOCHEMICAL PURITY: ≥ 95%

MOLECULAR WEIGHT: 4179

PACKAGING: [^{125}I]-Pancreatic Polypeptide (human) is lyophilized from 0.05M sodium phosphate (pH 5.2), containing 0.18M sodium chloride, 1M glycine, 0.25% bovine serum albumin. It is shipped ambient.

STABILITY AND STORAGE: The lyophilized [^{125}I]-Pancreatic Polypeptide (human) should be stored at 4°C or lower. Following reconstitution with distilled water to a concentration of approximately 50 µCi/ml on calibration date, aliquot and store at –20°C. Under these conditions [^{125}I]-Pancreatic Polypeptide (human) is stable and usable for at least 6 weeks after fresh lot date.

SPECIAL INFORMATION: [^{125}I]-Pancreatic Polypeptide (human) sticks to glass. We recommend using silanized glass or plastics to minimize this problem.

SPECIFIC ACTIVITY: The initial specific activity of [^{125}I]-Pancreatic Polypeptide (human) is 2200 Ci/mmol (81 TBq/mmol), 526 µCi/µg (19 MBq/µg). Upon decay, [^{125}I]-Pancreatic Polypeptide (human) 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. For information on ^{125}I decay and decay catastrophe of ^{125}I labeled compounds see references.[1-5]

PREPARATIVE PROCEDURE: Pancreatic Polypeptide (human) is radioiodinated with no-carrier-added ^{125}I using a modification of the Hunter and Greenwood method and purified by reversed phase HPLC.[6] Pancreatic Polypeptide (human) contains 4 tyrosine and 1 histidine residues thus many [^{125}I] positional isomers are formed. There are four major isomers and a number of minor impurities separated by preparative RP-HPLC. The peak selected shows the greatest receptor binding characteristics.[7,8] The position of the labeled tyrosine has not been determined.

RADIOCHEMICAL PURITY: Initially greater than 95% radiochemically pure as determined by reversed phase high performance liquid chromatography (RP-HPLC).

AVAILABILITY: [^{125}I]-Pancreatic Polypeptide (human) is routinely available from stock and is prepared fresh and packaged for shipment on the fourth Monday of each month. Please inquire for larger package sizes.

APPLICATIONS: [^{125}I]-Pancreatic Polypeptide (human) is useful for the characterization and localization of pancreatic polypeptide receptors in tissues. It can be used for receptor binding studies and is useful in autoradiography to determine the location and distribution of pancreatic polypeptide receptors in whole tissue

samples.[9,10]

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

RADIATION UNSHIELDED: 280mR/hr/mCi at vial surface.

REFERENCES:

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3. Loring, R.H., et al, *J. Biol. Chem*. 257 1418 (1982).
4. Berridge, M.S., Jiang, V.W. and Welch, M.J., *Radiation Research* 82 467 (1980).
5. Charlton, D.E., *Radiation Research* 107 163 (1986).
6. Hunter, W.M. and Greenwood, F.C., *Nature* 194 495 (1962).
7. Personal Communication.
8. Personal Communication.
9. Whitcomb, D. C., Taylor, I. L., Vigna, S. R., *Am. J. Physiol*. 259 G687-G691 (1990).
10. Schwartz, T. W., Sheikh, S. P., O'Hare, M. M. T., *FEBS Letters* 225 209-214 (1987).

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	.977	.955	.933	.912	.891	.871	.851	.831	.812
20	.794	.776	.758	.741	.724	.707	.691	.675	.660	.645
40	.630	.616	.602	.588	.574	.561	.548	.536	.524	.512
60	.500	.489	.477	.467	.456	.445	.435	.425	.416	.406
80	.397	.388	.379	.370	.362	.354	.345	.338	.330	.322
100	.315	.308	.301	.294	.287	.281	.274	.268	.262	.256
120	.250	.244	.239	.233	.228	.223	.218	.213	.208	.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.

Revvity, Inc.
940 Winter Street
Waltham, MA 02451 USA
(800) 762-4000
www.revvity.com