^{125}I Technical Data Certificate of Analysis

Caution: For Laboratory Use. A research chemical for research purposes only.

NEX176 **[^{125}I]Tyr^{12}-Gastrin I (human)**

[^{125}I]-Gastrin

pGlu-Gly-Pro-Trp-Leu-Glu-Glu-Glu-Glu-Glu-Ala-[^{125}I]Tyr-Gly-Trp-Met-Asp-Phe-NH_2[1]

LOT SPECIFIC INFORMATION:

CALCULATED AS OF:	**14-Jul-2014**	
LOT NUMBER:	**CP81540**	
SPECIFIC ACTIVITY:	**81.4**	**TBq/mmol**
	2200	**Ci/mmol**
	37	**MBq/µg**
	1000	**µCi/µg**

Package Size Information

Package Size as of 15-Aug-2014
370 kBq 10 µCi
1.85 MBq 50 µCi

RADIOCHEMICAL PURITY: **≥ 95%**

MOLECULAR WEIGHT: 2222

PACKAGING: [^{125}I]-Gastrin is lyophilized from a solution containing 0.04M sodium phosphate, 1M glycine, 0.2M NaCl, 0.25% BSA, 500 KIU/ml Trasylol® at pH 7.2. It is shipped ambient.

STABILITY AND STORAGE: The lyophilized [^{125}I]-Gastrin 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 or lower. Under these conditions the product is stable and usable in radioimmunoassays for at least four weeks after fresh lot date.

SPECIFIC ACTIVITY: The initial specific activity of [^{125}I]-Gastrin is 2200 Ci/mmol (81 TBq/mmol), 1000 µCi/µg (37 MBq/µg). Preparative HPLC is used to separate gastrin from [^{125}I]-Gastrin. Upon decay, [^{125}I]-Gastrin undergoes decay catastrophe and the specific activity remains constant with time. However, it is not known what molecular or peptide fragments are generated from the decay event or what functional activity these fragments may have in different assays. References on ^{125}I decay and decay catastrophe of ^{125}I labeled compounds are available.[2-6]

RADIOCHEMICAL PURITY: Initially greater than 95% radiochemically pure as determined by HPLC.

PREPARATIVE PROCEDURE: Gastrin is radioiodinated with no carrier added ^{125}I using a modification of the Hunter and Greenwood method[7] and purified by reversed phase HPLC.

AVAILABILITY: [^{125}I]-Gastrin is routinely available from stock and is prepared fresh and packaged for shipment 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 and is toxic.

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

REFERENCES:

1. Doyle, V.M., Buhler, F.R., Burgisser, E., *Eur. J. Pharm.* 99 353 (1984).
2. Schmidt, J., *J. Biol. Chem*. 259 1660 (1984).
3. Loring, (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. Hunter and Greenwood, F.C., Nature 194 495 (1962).
7. Gouarderes, C., Roumy, M., Advokat, C., Jhamandas, K., Zajac, J.M., *Synapase* 35(1) 45-52 (2000).
8. Gouarderes, C., Tafani, J.A., Mazarguil, H. and Zajac, J.M., *Brain Res Bul. l* 42(3) 231-8 (1997).
9. Dupouy, V. and Zajac, J.M., *Synapse* 24(3) 282-96(1996).

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	0.660	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	0.370	0.362	0.354	0.345	0.338	0.330	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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