

[¹²⁵I]-Human Growth Hormone

[¹²⁵I]-HGH

Product Number: NEX100

LOT SPECIFIC INFORMATION:

CALCULATED AS OF: 23-Dec-2024

LOT NUMBER: AH13150

SPECIFIC ACTIVITY:

| | |
|--------|----------|
| 102.1 | TBq/mmol |
| 2758.8 | Ci/mmol |
| 4.7 | MBq/μg |
| 128 | μCi/μg |

CONCENTRATION:

| | |
|------|--------|
| 3.4 | MBq/ml |
| 92.6 | μCi/ml |

RADIOCHEMICAL PURITY: >95%

MOLECULAR WEIGHT: ~21,500

Package Size Information

| Package Size as of 31-Jan-2025 | Volume |
|--------------------------------------|---------|
| 370 kBq 10 μCi | 0.20 ml |
| 1.85 MBq 50 μCi | 1.00 ml |

PACKAGING: [¹²⁵I]-HGH is in 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 on dry ice.

STABILITY AND STORAGE: [¹²⁵I]-HGH should be stored at -20°C or lower. It should be aliquoted in appropriate volumes to avoid repeated freeze-thaw cycles. Under these conditions, the product is stable and usable in radioimmunoassays for at least four weeks after fresh lot date.

SPECIFIC ACTIVITY: 85-130 μCi/μg (3.1-4.8 MBq/μg) on fresh lot date as determined from ¹²⁵I incorporation into human growth hormone. Specific activity decays with time.

RADIOCHEMICAL PURITY: Initially less than 5% unbound iodide as determined by thin layer chromatography.

PREPARATIVE PROCEDURE: Human growth hormone is radioiodinated with no carrier added ¹²⁵I using a modification of the Hunter and Greenwood method¹ and purified by gel filtration chromatography. This method predominantly labels tyrosine residues.

AVAILABILITY: [¹²⁵I]-HGH 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.

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

REFERENCE:

1. Hunter, W.M. and Greenwood, F.C. *Nature* 1962, 194, 495 (1962)
NEX100-R-REV01

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.

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