

# [<sup>125</sup>I]-Human Growth Hormone

## [<sup>125</sup>I]-HGH

Product Number: NEX100

### LOT SPECIFIC INFORMATION:

**CALCULATED AS OF:** 23-Sep-2024

**LOT NUMBER:** AHA0140

**SPECIFIC ACTIVITY:** 96.1 TBq/mmol  
2598.3 Ci/mmol  
4.5 MBq/μg  
121 μCi/μg

**CONCENTRATION:** 3.5 MBq/ml  
93.6 μCi/ml

**RADIOCHEMICAL PURITY:** >95%

**MOLECULAR WEIGHT:** ~21,500

### Package Size Information

Package Size as of 1-Nov-2024	Volume
370 kBq 10 μCi	0.20 ml
1.85 MBq 50 μCi	1.00 ml

**PACKAGING:** [<sup>125</sup>I]-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:** [<sup>125</sup>I]-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 <sup>125</sup>I 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 <sup>125</sup>I using a modification of the Hunter and Greenwood method<sup>1</sup> and purified by gel filtration chromatography. This method predominantly labels tyrosine residues.

**AVAILABILITY:** [<sup>125</sup>I]-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%)**

<b>DAYS</b>	<b>0</b>	<b>2</b>	<b>4</b>	<b>6</b>	<b>8</b>	<b>10</b>	<b>12</b>	<b>14</b>	<b>16</b>	<b>18</b>
<b>0</b>	1.000	.977	.955	.933	.912	.891	.871	.851	.831	.812
<b>20</b>	.794	.776	.758	.741	.724	.707	.691	.675	.660	.645
<b>40</b>	.630	.616	.602	.588	.574	.561	.548	.536	.524	.512
<b>60</b>	.500	.489	.477	.467	.456	.445	.435	.425	.416	.406
<b>80</b>	.397	.388	.379	.370	.362	.354	.345	.338	.330	.322
<b>100</b>	.315	.308	.301	.294	.287	.281	.274	.268	.262	.256
<b>120</b>	.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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