

# [<sup>125</sup>I]-INSULIN-LIKE GROWTH FACTOR-1 (HUMAN, RECOMBINANT)

## [<sup>125</sup>I]-IGF-1

Product Number: NEX241

### LOT SPECIFIC INFORMATION

**CALCULATED AS OF:** 15-Jan-2024

**LOT NUMBER:** FO22340

**SPECIFIC ACTIVITY:** 103.3 TBq/mmol  
2791 Ci/mmol  
13.3 MBq/μg  
359 μCi/μg

**UNBOUND IODIDE:** < 5%

**MOLECULAR WEIGHT** 7773

### Package Size Information

Package Size as of 23-Feb-2024
185 kBq 5 μCi
925 kBq 25 μCi

**PACKAGING:** [<sup>125</sup>I]-IGF-1 is lyophilized from a solution containing 0.05M sodium phosphate, 1M glycine, 0.2M NaCl, and 0.25% BSA at pH 5.2. It is shipped ambient.

**STABILITY AND STORAGE:** The lyophilized [<sup>125</sup>I]-IGF-1 should be stored at 4°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 or lower. Under these conditions the product is stable and usable for at least six weeks after fresh lot date.

**SPECIFIC ACTIVITY:** 210-360 μCi/μg (7.8-13.3 MBq/μg), 1630-2800 Ci/mmol (60-103 TBq/mmol) on fresh lot date as determined from <sup>125</sup>I incorporation into insulin-like growth factor-1. Equimolar protein and iodine implies 285 μCi/μg (10.5 MBq/μg). Specific activity decays with time.

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

**PREPARATIVE PROCEDURE:** Insulin-like growth factor-1 is radioiodinated with no carrier added <sup>125</sup>I by a lactoperoxidase procedure<sup>1</sup> and purified by reversed phase HPLC. This method predominantly labels tyrosine residues.

**AVAILABILITY:** [<sup>125</sup>I]-IGF-1 is routinely available from stock and is prepared fresh and packaged for shipment on the third Monday of each month. Please inquire for larger package sizes.

**APPLICATIONS:** Insulin-like growth factor-1 (an anabolic peptide hormone) stimulates growth, metabolism, and repair of damaged tissues. [<sup>125</sup>I]-IGF-1 finds use in receptor binding, radioimmunoassay, and autoradiography.

**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 ingestion or inhalation. It is irritating to the

This product also contains a component which is harmful by contact, ingestion or inhalation. It is irritating to the eyes, skin and respiratory tract. It is toxic.

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

**REFERENCES:**

1. Morrison, M., Bayse, G. S., Webster, R. G., *Immunochemistry* 8, 289-297 (1971).

**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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