

# [<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:** 18-Mar-2024

**LOT NUMBER:** FO41940

**SPECIFIC ACTIVITY:**

97.8	TBq/mmol
2642	Ci/mmol
12.6	MBq/μg
340	μCi/μg

**UNBOUND IODIDE:** < 5%

**MOLECULAR WEIGHT** 7773

### Package Size Information

Package Size as of 19-Apr-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.  
NEX241-R-REV01

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%)

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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