

[¹²⁵I]-Bolton-Hunter Labeled MCP-1

[¹²⁵I]-MCP-1

(Human, Recombinant)

Product Number: NEX332

LOT SPECIFIC INFORMATION

CALCULATED AS OF: 2-Mar-2026

LOT NUMBER: HO41060

SPECIFIC ACTIVITY: 81.4 TBq/mmol
2200 Ci/mmol
9.5 MBq/μg
256 μCi/μg

Package Size Information

Package Size as of 10-Apr-2026
185 kBq 5 μCi
925 kBq 25 μCi

UNBOUND IODIDE: <5% unbound iodine

MOLECULAR WEIGHT: ~8600

PACKAGING: [¹²⁵I]-MCP-1 is lyophilized from a solution containing 0.05M sodium acetate, 5% sucrose, 0.25% BSA at pH 4.2. It is shipped on dry ice.

STABILITY AND STORAGE: The lyophilized [¹²⁵I]-MCP-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 4°C. Under these conditions the product is stable and usable in radioimmunoassays and receptor assays for at least six weeks after fresh lot date.

SPECIAL INFORMATION: [¹²⁵I]-MCP-1 sticks to glass. We recommend using silanized glass or plastics to minimize this problem.

SPECIFIC ACTIVITY: The initial specific activity of [¹²⁵I]-MCP-1 is 2200 Ci/mmol (81 TBq/mmol) 256 μCi/μg (9.5 MBq/μg). Preparative HPLC separates unlabeled MCP-1 from [¹²⁵I]-MCP-1. Upon decay, [¹²⁵I]-MCP-1 undergoes decay catastrophe and the specific activity remains constant with time. However, it is not known what molecular fragments are generated from the decay event or what functional activity these fragments may have in different assays. References on ¹²⁵I decay and decay catastrophe of ¹²⁵I labeled compounds are available.¹⁻⁵

RADIOCHEMICAL PURITY: Initially less than 5% unbound iodide as determined by ITLC.

PREPARATIVE PROCEDURE: MCP-1 (human, recombinant) is radioiodinated with [¹²⁵I]-Bolton-Hunter Reagent⁶ (monoiodinated) and is purified by reversed phase HPLC. [¹²⁵I]-Bolton-Hunter Reagent typically labels lysine residues.

AVAILABILITY: [¹²⁵I]-MCP-1 is routinely available from stock and is prepared fresh and packaged for shipment on the first Monday of each month. Please inquire for larger package sizes.

APPLICATIONS: MCP-1 (MCAF) interacts with blood monocytes and tissue macrophages in the inflammatory response⁷. Associated diseases include allergies, pneumonia, and atherosclerosis.^{8,9} ¹²⁵I-MCP-1 labeled with Bolton-Hunter Reagent (monoiodinated) complements ¹²⁵I-MCAF (MCP-1), NEX-282, labeled on tyrosine. Bolton-Hunter labeling avoids modifying tyrosine 28, that has an important role in binding.¹⁰ Other related CC chemokine products include: ¹²⁵I-

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 and is slightly irritating to the eyes and skin.

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

REFERENCES:

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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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