[^{125}I]-Fractalkine (Human, Recombinant)

CX_3CL1

Product Number: NEX368

LOT SPECIFIC INFORMATION

CALCULATED AS OF: 3-Jun-2024

LOT NUMBER: JC70540

SPECIFIC ACTIVITY:
81.4 TBq/mmol
2200 Ci/mmol
9.6 MBq/µg
259.0 µCi/µg

CONCENTRATION:
3.12 MBq/ml
84.2 µCi/ml

UNBOUND IODIDE: <5% unbound iodine

MOLECULAR WEIGHT: ~8500

Package Size Information

Package Size as of 5-Jul-2024	Volume
370 kBq 10 µCi	0.20 ml
925 kBq 25 µCi	0.50 ml

PACKAGING: [^{125}I]-Fractalkine is in a solution containing 0.05M sodium acetate, 5% sucrose, 0.25% BSA, and a stabilizer, at pH 4.0-4.2. It is shipped on dry ice.

STABILITY AND STORAGE: [^{125}I]-Fractalkine 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 has been shown to be useful for at least three weeks after fresh lot date.

SPECIAL INFORMATION: [^{125}I]-Fractalkine sticks to glass. We recommend using silanized glass or plastic to minimize this problem.

SPECIFIC ACTIVITY: The initial specific activity of [^{125}I]-Fractalkine is 2200 Ci/mmol, (81 TBq/mmol), 259 µCi/µg (9.6 MBq/µg). Preparative HPLC is used to separate unlabeled Fractalkine from [^{125}I]-Fractalkine. Upon decay, [^{125}I]-Fractalkine 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 ^{125}I decay and decay catastrophe of ^{125}I labeled compounds are available.[1-5].

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

PREPARATIVE PROCEDURE: Fractalkine CX3C (human, recombinant), obtained from PeproTech, Inc., Rocky Hill, NJ, is radioiodinated with no carrier added ^{125}I using a lactoperoxidase procedure and is purified by reversed phase HPLC. This method predominantly labels tyrosine residues.

AVAILABILITY: [^{125}I]-Fractalkine 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: Fractalkine is the first member of a new class of chemokines.[6,7] [^{125}I]-Fractalkine binds with high affinity to the CX3CR1 receptor.[8] [^{125}I]-Fractalkine will be useful for the localization and characterization of CXCR1 receptors.

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, ingestion or inhalation. It is irritating to the eyes. It is toxic and flammable. The target organs are the central nervous system, respiratory system, kidneys and liver.

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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