

Supplementary Materials

Effects of skeleton structure on necrosis targeting and clearance properties of radioiodinated dianthrone

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Contents:

- a) Separation method of ProHyp
- b) Separation method of ED-1 and ED-2.
- c) Analysis methods.

a) Separation method of ProHyp

Preparative RP-HPLC was performed on a Waters chromatograph equipped with a Waters 2545 solvent delivery system, coupled to a Waters 2489 UV/Visible detector, with the MassLynx Software controlling the system. A sunfireTM C18 preparative column (5 μ m, 150 mm x 19 mm) was eluted at a flow rate of 17 mL/min with the following gradient: an isocratic elution of 80% MeOH in 5 mM NH₄Ac aqueous solution over 9 min, followed by a linear gradient from 80% to 90% MeOH in 5 mM NH₄Ac aqueous solution over 0.5 min, then 90% MeOH in 5 mM NH₄Ac aqueous solution over 3 min, followed by a linear gradient from 90% to 100% MeOH in 5 mM NH₄Ac aqueous solution over 0.5 min, and then 100% MeOH in 5 mM NH₄Ac aqueous solution over 12 min. The temperature of column was 30°C.

b) Separation method of ED-1 and ED-2.

Preparative RP-HPLC was performed on a Waters chromatograph equipped with a Waters 2545 solvent delivery system, coupled to a Waters 2489 UV/Visible detector, with the MassLynx Software controlling the system. A sunfireTM C18 preparative column (5 μ m, 150 mm x 19 mm) was eluted at a flow rate of 17 mL/min in an isocratic mode of 55% acetonitrile in water (0.1% phosphoric acid, v/v) and the temperature of column was 30°C.

c) Analysis methods.

Radiochemical yield of each ^{131}I -dianthrone was determined by RP-HPLC on a Waters chromatograph equipped with a Waters 2695 solvent delivery system, coupled to a Berthold HERM LB500 radiometric detector, with the Empower Software controlling the system and processing the data. A GRACE AlltimaTM C18 analytical column (5 μm , 250 mm x 4.6 mm) was eluted at a flow rate of 1 mL/min with the following gradient: for ^{131}I -Hyp, an isocratic elution of 75% MeOH in 5 mM NH_4Ac aqueous solution over 9 min, followed by a linear gradient from 75% to 90% MeOH in 5 mM NH_4Ac aqueous solution over 1 min, and then 90% MeOH in 5 mM NH_4Ac aqueous solution over 15 min; for ^{131}I -ProHyp, an isocratic elution of 75% MeOH in 5 mM NH_4Ac aqueous solution over 7 min, followed by a linear gradient from 75% to 90% MeOH in 5 mM NH_4Ac aqueous solution over 1 min, and then 90% MeOH in 5 mM NH_4Ac aqueous solution over 17 min; for ^{131}I -ED-1 and ^{131}I -ED-2, an isocratic elution of 65% MeOH in 5 mM NH_4Ac aqueous solution over 8 min, followed by a linear gradient from 65% to 90% MeOH in 5 mM NH_4Ac aqueous solution over 1 min, and then 90% MeOH in 5 mM NH_4Ac aqueous solution over 16 min.