

## Supporting Information

### Comparative study of a series of $^{99m}\text{Tc}(\text{CO})_3$ Mannosylated Dextran Derivatives for Sentinel Lymph Node Detection

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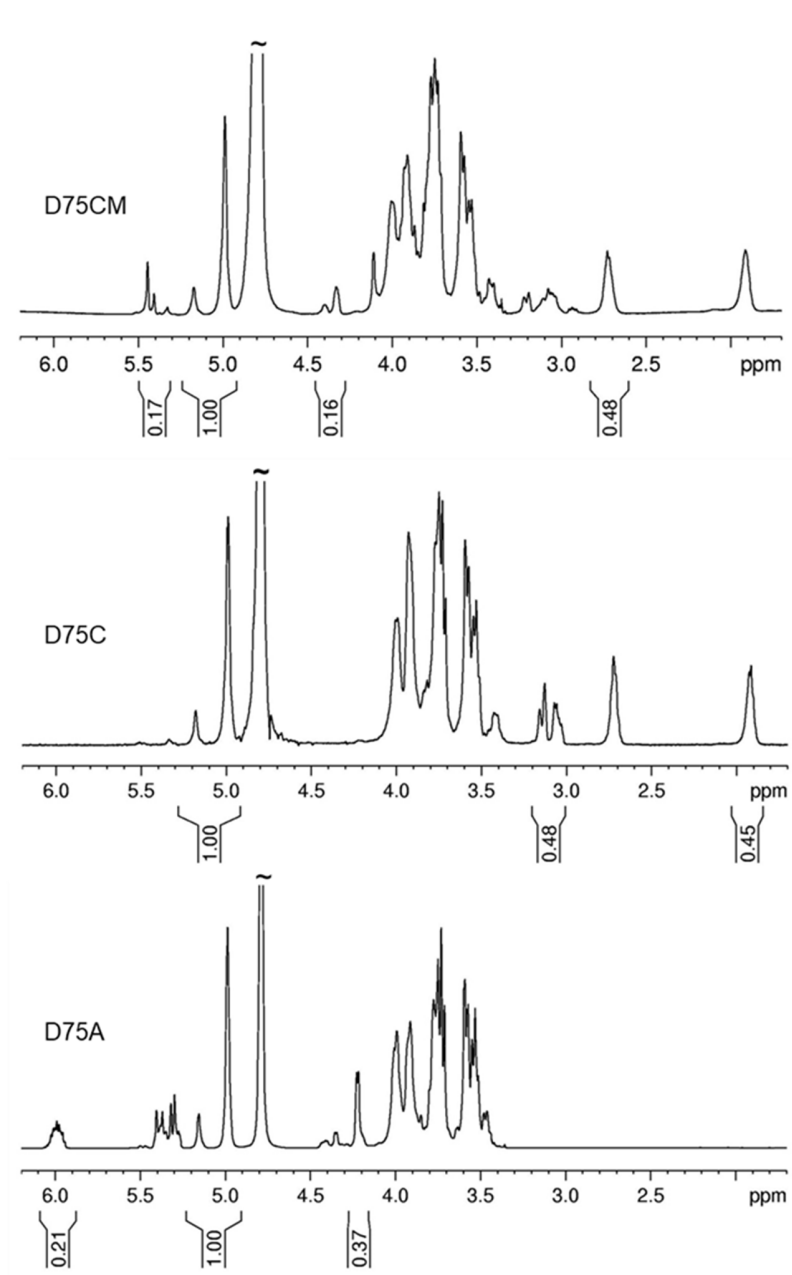
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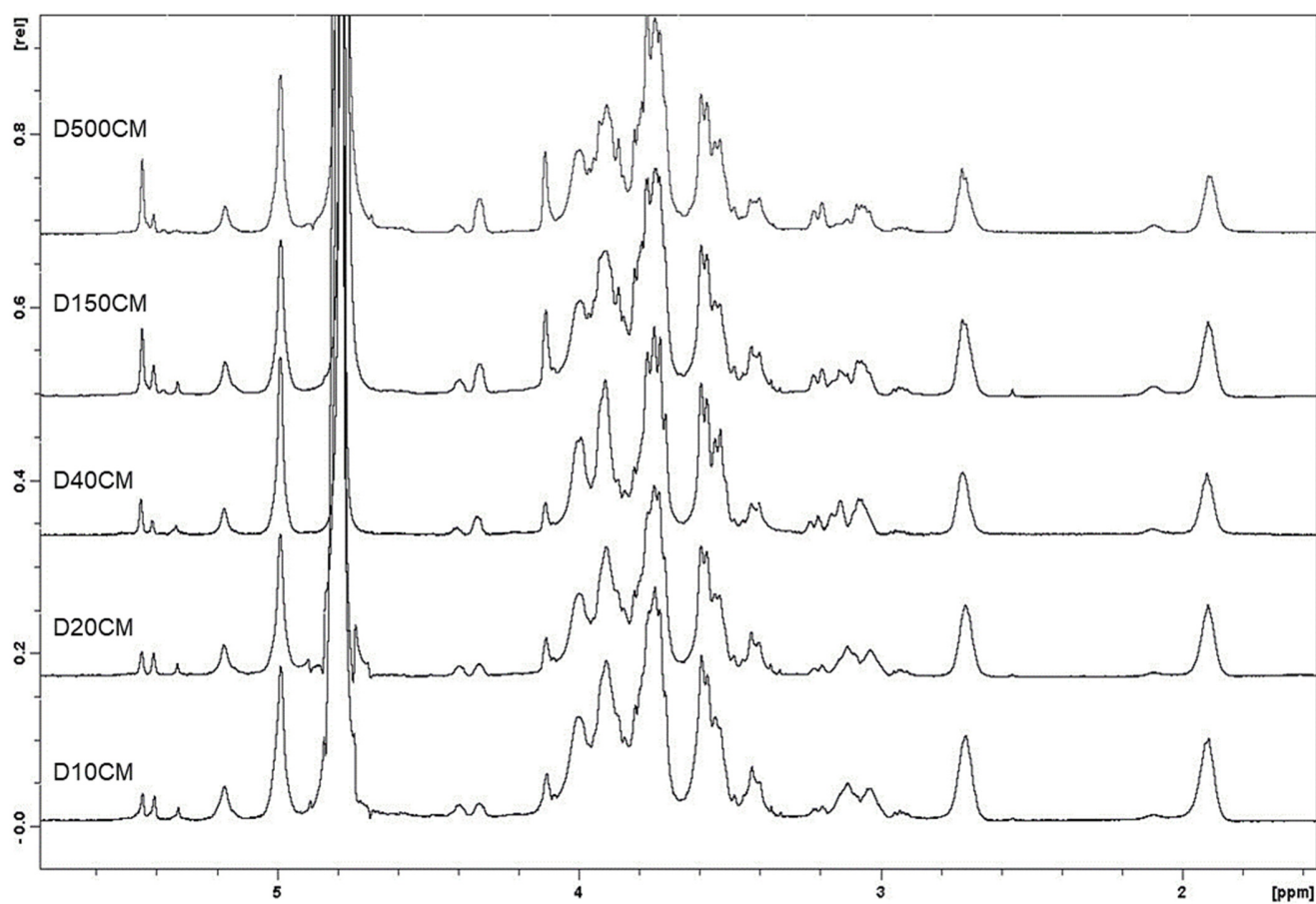
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**Figure S1.**  $^1\text{H}$  NMR spectra (range  $\delta_{\text{H}}$  6.2–1.7) of the allyl derivative D75A, the S-derivatized cysteinyl dextran D75C and the mannosylated dextran D75CM in  $\text{D}_2\text{O}$  at 25  $^{\circ}\text{C}$ .



**Figure S2.**  $^1\text{H}$  NMR spectra (range 5.78 -1.56 ppm) of the D10CM, D20CM, D40CM, D150CM and D500CM derivatives in  $\text{D}_2\text{O}$  at 25 °C.

**Table S1.** Biodistribution of radioactivity after subcutaneous injection to the rear footpad of <sup>99m</sup>Tc-D10CM - D500CM in mice at (a) 15, (b) 60 and (c) 180 min.

a) 15 min p.i.	<sup>99m</sup> Tc-D10CM	<sup>99m</sup> Tc-D20CM	<sup>99m</sup> Tc-D40CM	<sup>99m</sup> Tc-D75CM	<sup>99m</sup> Tc-D150CM	<sup>99m</sup> Tc-D500CM
Blood	0.76 ± 0.18	0.52 ± 0.12	1.60 ± 0.82	1.93 ± 0.91	2.06 ± 0.14	1.53 ± 0.44
Liver	2.77 ± 0.42	1.08 ± 0.40	2.65 ± 1.29	3.62 ± 0.87	3.72 ± 0.75	1.37 ± 0.27
Heart	0.87 ± 0.24	0.18 ± 0.02	0.72 ± 0.21	0.44 ± 0.12	0.57 ± 0.07	0.29 ± 0.09
Kidneys	3.12 ± 0.38	1.59 ± 0.11	2.20 ± 0.87	2.22 ± 0.47	3.06 ± 0.86	1.52 ± 0.51
Stomach	0.15 ± 0.02	0.07 ± 0.03	0.46 ± 0.28	0.33 ± 0.17	0.24 ± 0.09	0.77 ± 0.30
Intestines	0.22 ± 0.02	0.06 ± 0.01	0.33 ± 0.11	0.36 ± 0.12	0.34 ± 0.08	0.21 ± 0.11
Spleen	0.52 ± 0.01	0.31 ± 0.08	0.81 ± 0.48	0.73 ± 0.22	0.38 ± 0.18	0.50 ± 0.23
Muscle	0.11 ± 0.00	0.06 ± 0.02	0.29 ± 0.18	0.17 ± 0.11	0.18 ± 0.04	0.11 ± 0.03
Lungs	0.32 ± 0.08	0.19 ± 0.12	1.33 ± 0.59	0.96 ± 0.50	1.11 ± 0.40	0.62 ± 0.21
Urine*	1.94 ± 0.30	0.95 ± 0.37	0.76 ± 0.27	2.06 ± 0.74	2.03 ± 0.52	1.64 ± 0.18
1 <sup>st</sup> node*	4.71 ± 0.13	3.04 ± 0.36	1.61 ± 0.39	4.20 ± 0.84	4.16 ± 0.75	3.53 ± 0.44
2 <sup>nd</sup> node*	1.84 ± 0.05	1.77 ± 0.39	0.49 ± 0.07	0.99 ± 0.75	0.97 ± 0.30	1.22 ± 0.10
Injection site*	68.24 ± 0.70	74.68 ± 0.72	63.11 ± 2.94	66.84 ± 1.96	63.28 ± 1.51	72.47 ± 2.72

b) 60 min p.i.	<sup>99m</sup> Tc-D10CM	<sup>99m</sup> Tc-D20CM	<sup>99m</sup> Tc-D40CM	<sup>99m</sup> Tc-D75CM	<sup>99m</sup> Tc-D150CM	<sup>99m</sup> Tc-D500CM
Blood	0.31 ± 0.02	0.10 ± 0.03	1.62 ± 0.23	0.40 ± 0.19	0.92 ± 0.03	0.75 ± 0.15
Liver	3.86 ± 0.55	1.38 ± 0.13	1.70 ± 0.71	3.70 ± 1.44	3.76 ± 0.22	2.72 ± 0.25
Heart	0.27 ± 0.03	0.14 ± 0.06	0.56 ± 0.10	0.34 ± 0.11	0.28 ± 0.04	0.18 ± 0.02
Kidneys	1.84 ± 1.15	0.40 ± 0.03	1.02 ± 0.51	0.90 ± 0.09	1.97 ± 0.47	0.92 ± 0.15
Stomach	0.32 ± 0.11	0.05 ± 0.04	0.85 ± 0.33	0.29 ± 0.04	0.14 ± 0.08	0.86 ± 0.54
Intestines	0.31 ± 0.03	0.11 ± 0.01	0.62 ± 0.08	0.33 ± 0.08	0.73 ± 0.31	0.28 ± 0.03
Spleen	0.95 ± 0.29	0.44 ± 0.14	1.92 ± 0.40	1.43 ± 1.33	1.82 ± 0.39	0.78 ± 0.12
Muscle	0.10 ± 0.02	0.06 ± 0.02	0.19 ± 0.03	0.15 ± 0.03	0.09 ± 0.03	0.06 ± 0.01
Lungs	0.24 ± 0.01	0.09 ± 0.01	0.91 ± 0.05	0.31 ± 0.06	0.39 ± 0.12	0.29 ± 0.03
Urine*	0.79 ± 0.70	1.73 ± 1.22	0.85 ± 1.21	1.69 ± 2.39	1.48 ± 0.42	2.31 ± 1.55
1 <sup>st</sup> node*	7.49 ± 0.88	8.36 ± 0.73	7.40 ± 0.89	15.00 ± 1.50	11.73 ± 0.64	5.80 ± 0.58
2 <sup>nd</sup> node*	2.28 ± 0.19	2.37 ± 0.30	2.00 ± 0.31	1.81 ± 0.77	2.17 ± 0.29	1.93 ± 0.49
Injection site*	64.03 ± 1.56	71.41 ± 0.92	51.59 ± 4.25	53.20 ± 2.96	56.34 ± 3.69	68.15 ± 3.88

c) 180 min p.i.	<sup>99m</sup> Tc-D10CM	<sup>99m</sup> Tc-D20CM	<sup>99m</sup> Tc-D40CM	<sup>99m</sup> Tc-D75CM	<sup>99m</sup> Tc-D150CM	<sup>99m</sup> Tc-D500CM
Blood	0.23 ± 0.01	0.08 ± 0.02	1.17 ± 0.02	0.18 ± 0.04	0.29 ± 0.12	0.20 ± 0.02
Liver	2.75 ± 0.59	1.79 ± 0.35	3.85 ± 2.03	2.22 ± 0.16	4.14 ± 1.94	3.30 ± 0.34
Heart	0.19 ± 0.00	0.09 ± 0.03	0.40 ± 0.05	0.35 ± 0.03	0.27 ± 0.06	0.10 ± 0.01
Kidneys	1.17 ± 0.66	0.51 ± 0.21	0.76 ± 0.92	0.76 ± 0.13	1.74 ± 0.39	0.52 ± 0.09
Stomach	0.31 ± 0.10	0.25 ± 0.17	1.10 ± 0.44	1.08 ± 0.66	0.48 ± 0.37	1.02 ± 0.29
Intestines	0.27 ± 0.02	0.29 ± 0.18	1.68 ± 0.13	0.81 ± 0.60	0.63 ± 0.13	0.32 ± 0.04
Spleen	0.39 ± 0.08	0.39 ± 0.10	1.13 ± 0.51	1.19 ± 0.33	1.82 ± 0.97	1.68 ± 0.94
Muscle	0.08 ± 0.02	0.03 ± 0.01	0.75 ± 0.41	0.34 ± 0.11	0.07 ± 0.01	0.02 ± 0.01
Lungs	0.18 ± 0.02	0.09 ± 0.03	0.30 ± 0.27	0.38 ± 0.06	0.26 ± 0.05	0.13 ± 0.01
Urine*	4.37 ± 2.19	1.32 ± 1.83	1.80 ± 1.27	4.45 ± 3.23	5.58 ± 1.72	5.15 ± 0.60
1 <sup>st</sup> node*	7.73 ± 0.75	6.44 ± 1.01	8.79 ± 0.25	13.53 ± 0.45	12.54 ± 1.93	7.53 ± 1.41
2 <sup>nd</sup> node*	2.29 ± 0.52	1.65 ± 0.69	2.28 ± 0.24	1.49 ± 0.20	2.11 ± 0.23	2.30 ± 0.59
Injection site*	62.60 ± 1.23	70.78 ± 0.97	46.84 ± 4.57	51.04 ± 1.20	55.20 ± 4.12	62.52 ± 3.19

The results are expressed as % ID/g. Mean values are reported ± SD; n = 3. \*Mean % ID values are reported ± SD; n = 3.