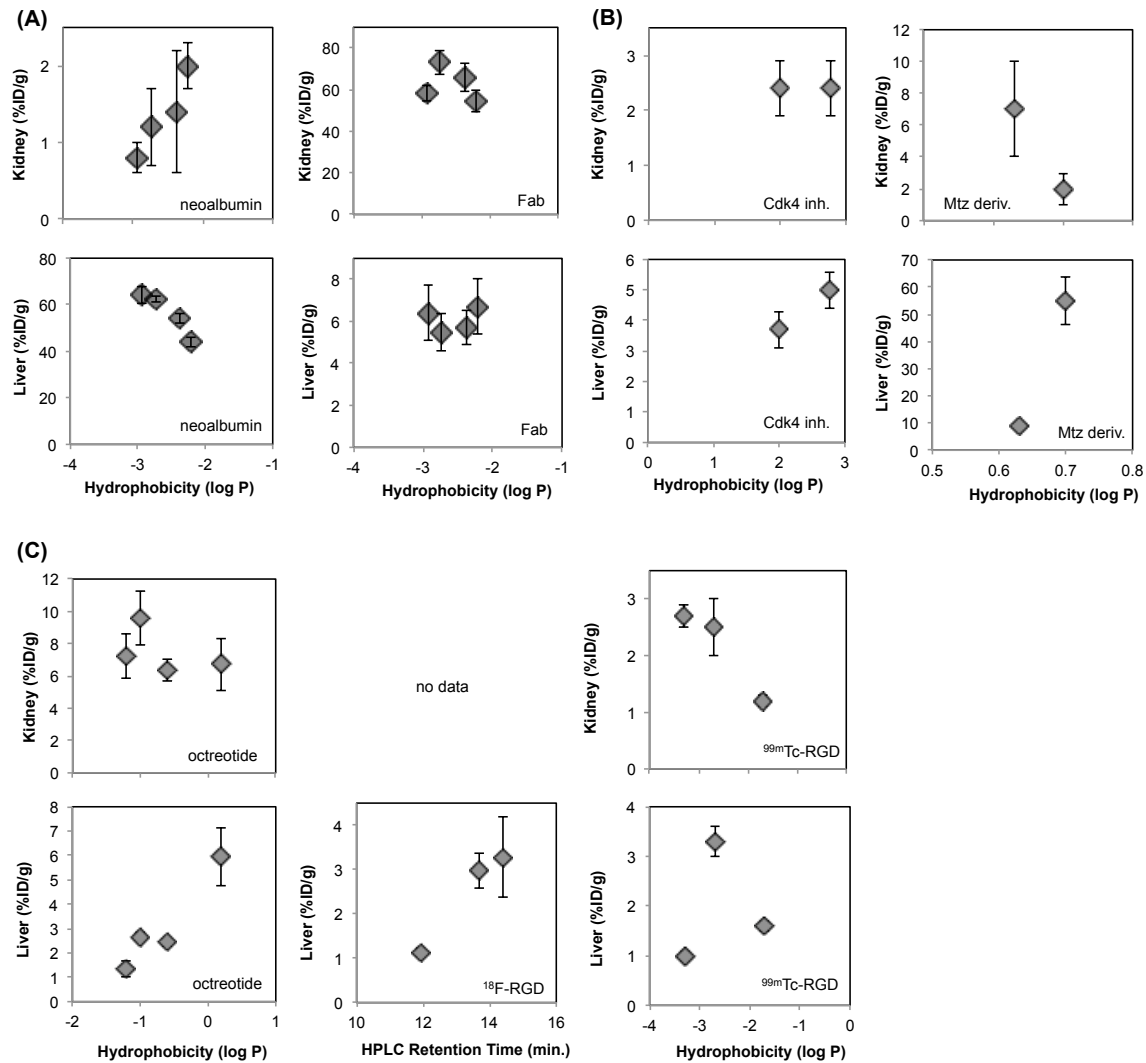


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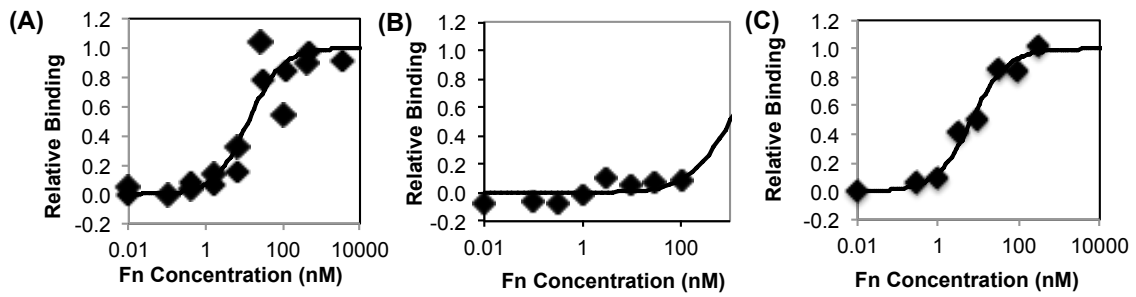
Supplemental

Supplemental Table 1. Charge mutant analysis. Mutants of A' were produced in BL21(DE3), purified, and analyzed by RP-HPLC using a 10-90% acetonitrile gradient over 30 min. The yield and retention time shift, both relative to A', are indicated.

Mutant	Yield	Δt_R (min.)
D3S	59%	0.0
R6N	326%	0.4
D7T	114%	0.0
E9Q	65%	-0.4
E9S	45%	0.0
R33Q	<10%	-
R33N	<10%	-
R33S	<10%	-
E38P	90%	-0.1
E38S	<10%	-
E47Q	48%	-0.1
E47T	78%	0.2
N63K	244%	-0.3
D67Q	67%	-0.2
D67T	64%	0.2
R93T	114%	0.0



Supplemental Figure 1. Published studies of the impact of hydrophobicity on renal and hepatic uptake. (A) Protein data for ^{99m}Tc -labeled neoalbumin and ^{99m}Tc -labeled Fab fragments with different coligands at 1 h post-injection(1). (B) Small molecule data for ^{124}I -labeled cyclin-dependent kinase inhibitors at 1 h post-injection(2) and ^{99m}Tc -labeled metronidazole derivatives at 4 h post-injection(3). (C) Peptide data for glycosylation variants of ^{125}I -labeled octreotide at 0.5 h post-injection(4), and ^{18}F -labeled cyclic RGD peptide variants at 2 h post-injection(5), and ^{99m}Tc -labeled cyclic RGD peptide with different coligands at 1 h post-injection(6).



Supplemental Figure 2. Affinity titrations. Cells were labeled at the indicated concentrations with His₆-tagged fibronectin domains and fluorescein-conjugated anti-His₆ antibody and were analyzed by flow cytometry. (A) Balb3T3 murine fibroblasts labeled with DOTA-conjugated A', (B) A431 human epidermoid carcinoma labeled with A' with a scrambled four amino acid segment in the FG loop, and (C) A431 human epidermoid carcinoma labeled with DOTA-conjugated D' R54A .

Supplemental References

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