

## SUPPLEMENTARY INFORMATION

### Molecular design of radiocopper-labelled affibody molecules

Vladimir Tolmachev<sup>1, ©</sup>, Tove J Grönroos<sup>2, 3, 4, ©</sup>, Cheng-Bin Yim<sup>2, 5</sup>, Javad Garousi<sup>1</sup>, Ying Yue<sup>6</sup>, Sebastian Grimm<sup>6</sup>, Johan Rajander<sup>5</sup>, Anna Perols<sup>6</sup>, Merja Haaparanta-Solin<sup>2, 7</sup>, Olof Solin<sup>2, 5, 7</sup>, Riccardo Ferdani<sup>8</sup>, Anna Orlova<sup>9</sup>, Carolyn Anderson<sup>10</sup>, Amelie Eriksson Karlström<sup>6</sup>.

© VT and TJG contributed equally

<sup>1</sup> Department of Immunology, Genetics and Pathology, Uppsala University, Uppsala, Sweden;

<sup>2</sup> Turku PET Centre, University of Turku, Turku, Finland;

<sup>3</sup> MediCity Research Laboratory, University of Turku, Turku, Finland;

<sup>4</sup> Department of Oncology and Radiotherapy, Turku University Hospital, Turku, Finland

<sup>5</sup> Turku PET Centre, Åbo Akademi University, Turku, Finland;

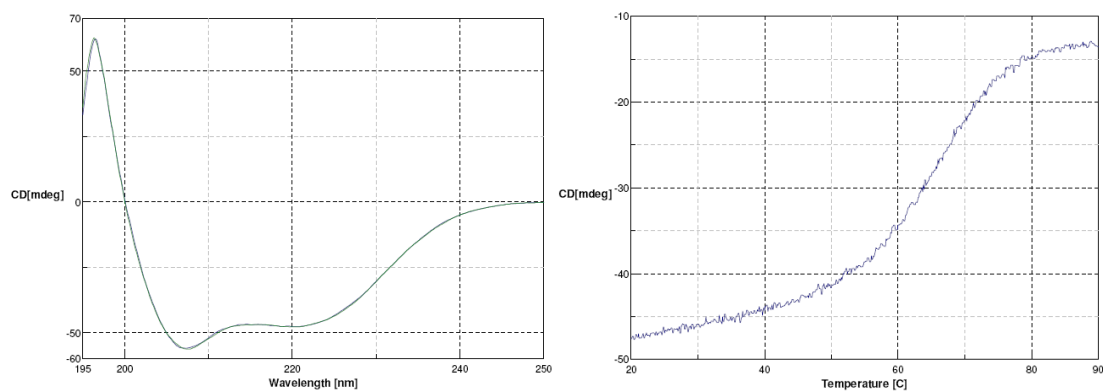
<sup>6</sup> Division of Protein Technology, School of Biotechnology, KTH Royal Institute of Technology, Stockholm, Sweden;

<sup>7</sup> Department of Chemistry, University of Turku, Turku, Finland;

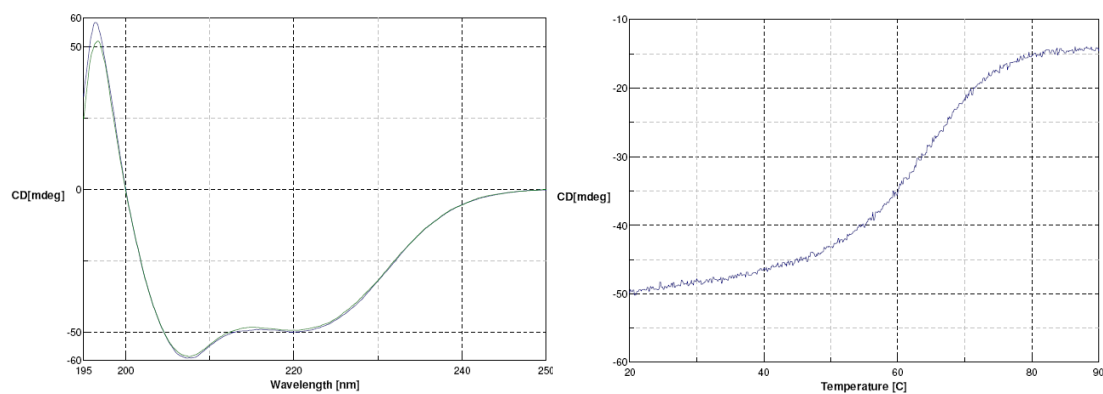
<sup>8</sup> Washington University, St. Louis, MO

<sup>9</sup> Department of Medicinal Chemistry, Uppsala University, Uppsala, Sweden

<sup>10</sup> Departments of Medicine, Radiology, Bioengineering and Pharmacology & Chemical Biology, University of Pittsburgh, Pittsburgh, PA, 15203, USA



**Figure S1.** CD studies of CB-TE2A-GEEE-ZHER2:342. CD spectra recorded at 20 °C before and after variable temperature measurements (left) and the thermal melting curve recorded at 221 nm (right).



**Figure S2.** CD studies of CB-TE2A-G-ZHER2:342. CD spectra recorded at 20 °C before and after variable temperature measurements (left) and the thermal melting curve recorded at 221 nm (right)

**Table S1.** Stability of  $^{64}\text{Cu}$ -CB-TE2A-GEEE-ZHER2:342 and  $^{64}\text{Cu}$ -CB-TE2A-G-ZHER2:342 under 1-h challenge with 500-fold excess of EDTA.

	Peptide-associated radioactivity (%)	
	$^{64}\text{Cu}$ -CB-TE2A-G-ZHER2:342	$^{64}\text{Cu}$ -CB-TE2A-GEEE-ZHER2:342
EDTA solution	99.1 $\pm$ 0.0	99.8 $\pm$ 0.3
PBS (control)	99.3 $\pm$ 0.2	99.7 $\pm$ 0.1