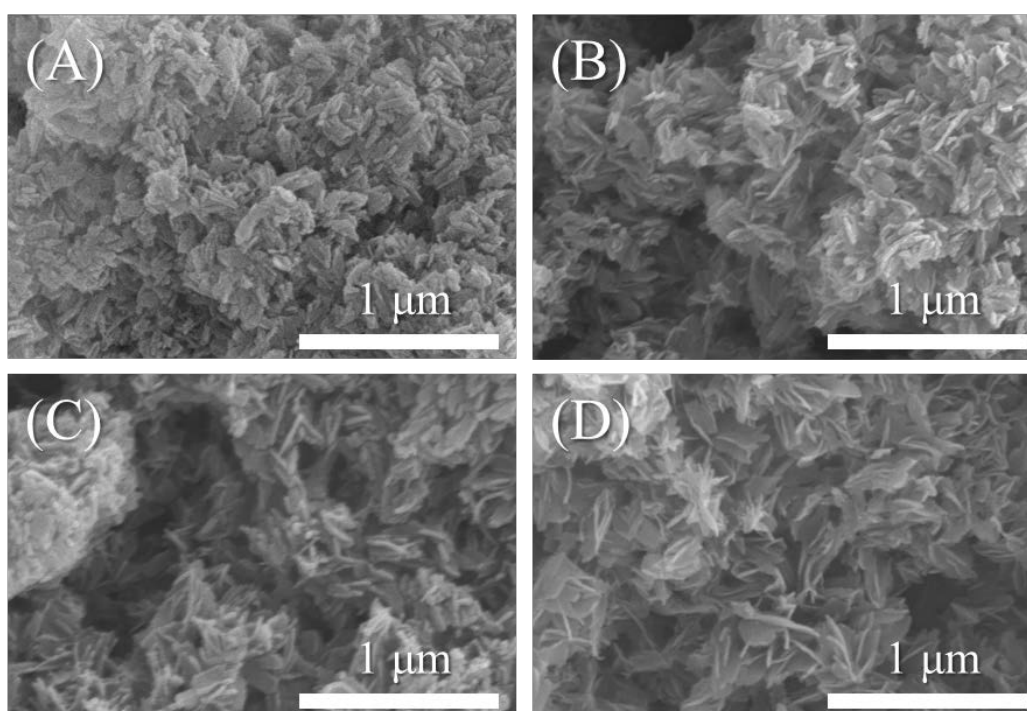


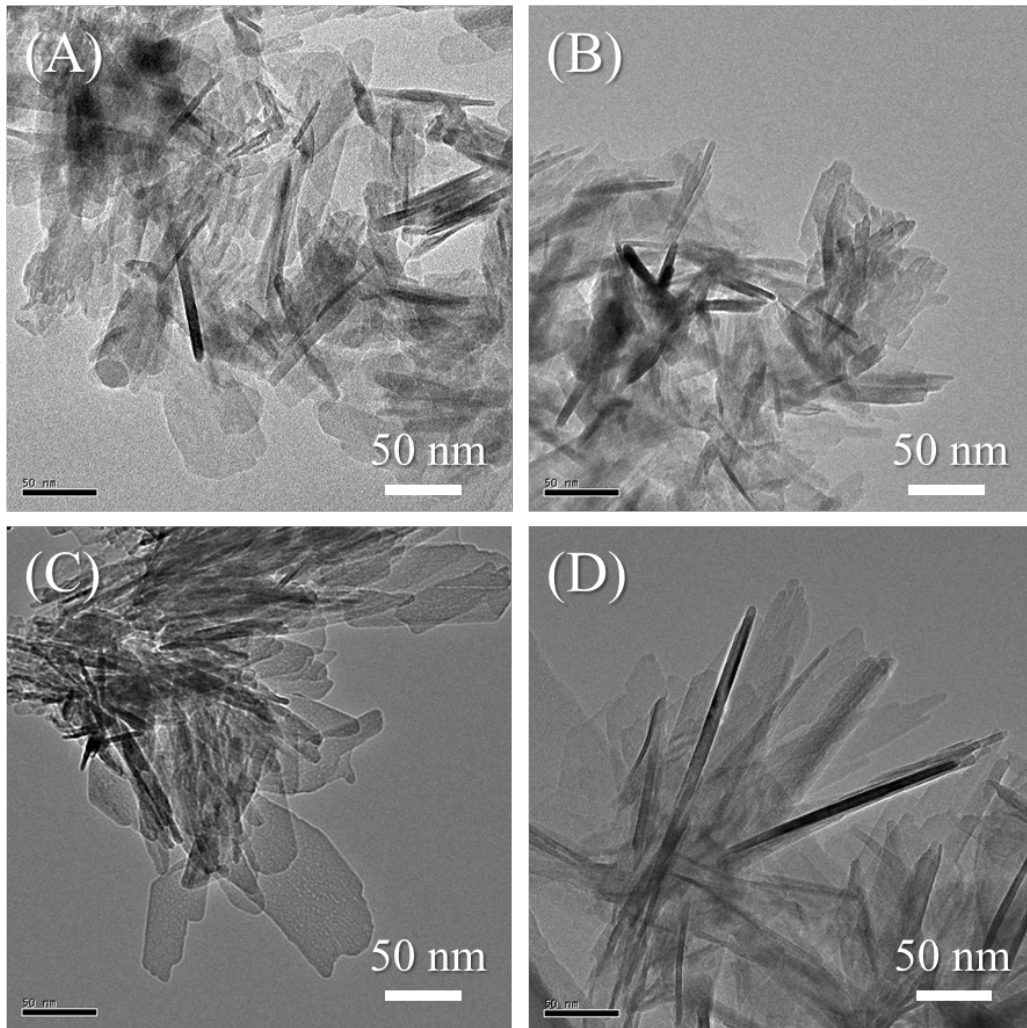
## Supplementary material

### Avidin-adsorbed peptide–calcium phosphate composites exhibiting high biotin-binding activity

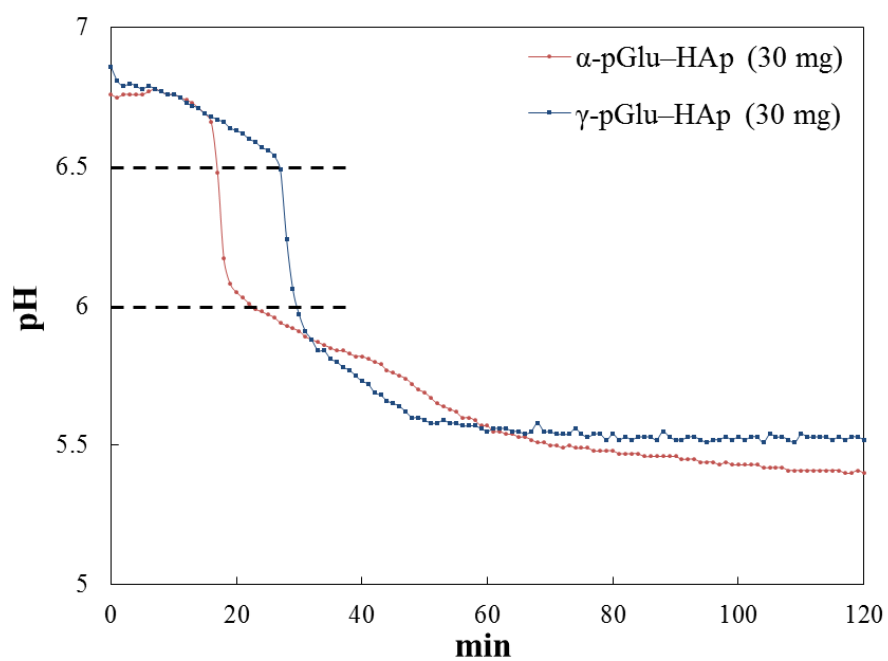
Suzuka Kojima, Fukue Nagata, Masahiko Inagaki, Shinichi Kugimiya, Katsuya Kato



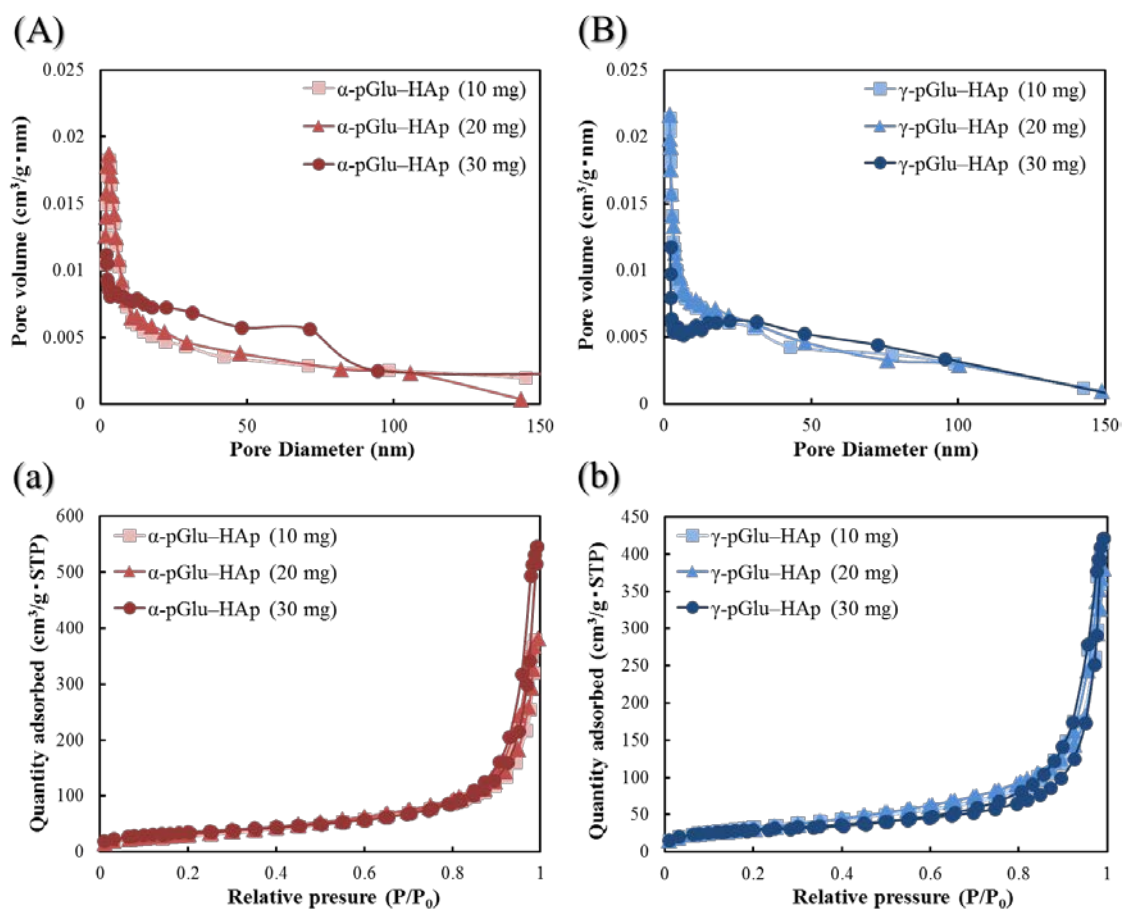
**Fig. S1** FE-SEM images of pGlu–HAp particles: (A)  $\alpha$ -pGlu–HAp (10 mg), (B)  $\alpha$ -pGlu–HAp (20 mg), (C)  $\gamma$ -pGlu–HAp (10 mg) and (D)  $\gamma$ -pGlu–HAp (20 mg).



**Fig. S2** TEM images of pGlu-HAp particles: (A)  $\alpha$ -pGlu-HAp (10 mg), (B)  $\alpha$ -pGlu-HAp (20 mg), (C)  $\gamma$ -pGlu-HAp (10 mg) and (D)  $\gamma$ -pGlu-HAp (20 mg).



**Fig. S3** Change in pH value in the synthesis of  $\alpha$ -pGlu-HAp (30 mg) and  $\gamma$ -pGlu-HAp (30 mg).



**Fig. S4** Pore size distribution curves (A and B) and  $\text{N}_2$  adsorption–desorption isotherms (a and b) of  $\alpha$ -pGlu–HAp (10, 20 and 30 mg) and  $\gamma$ -pGlu–HAp (10, 20 and 30 mg).

**Table S1** Secondary structures (%) of  $\alpha$ -pGlu and  $\gamma$ -pGlu

<b>Sample</b>	<b><math>\alpha</math>-helix</b>	<b><math>\beta</math>-sheet</b>	<b><math>\beta</math>-turn</b>	<b>Other</b>
<b><math>\alpha</math>-pGlu</b>	16 %	31 %	25 %	28 %
<b><math>\alpha</math>-pGlu+Ca<sup>a)</sup></b>	>99 %	—*	—*	—*
<b><math>\gamma</math>-pGlu</b>	>99 %	—*	—*	—*
<b><math>\gamma</math>-pGlu+Ca<sup>a)</sup></b>	>99 %	—*	—*	—*

\* Trace percent.

a) Each peptide (9 mg) was added to 45 mM of (CH<sub>3</sub>COO)<sub>2</sub>Ca solution (20 mL). After stirring for 2 h, the solid material was obtained by freeze-drying.

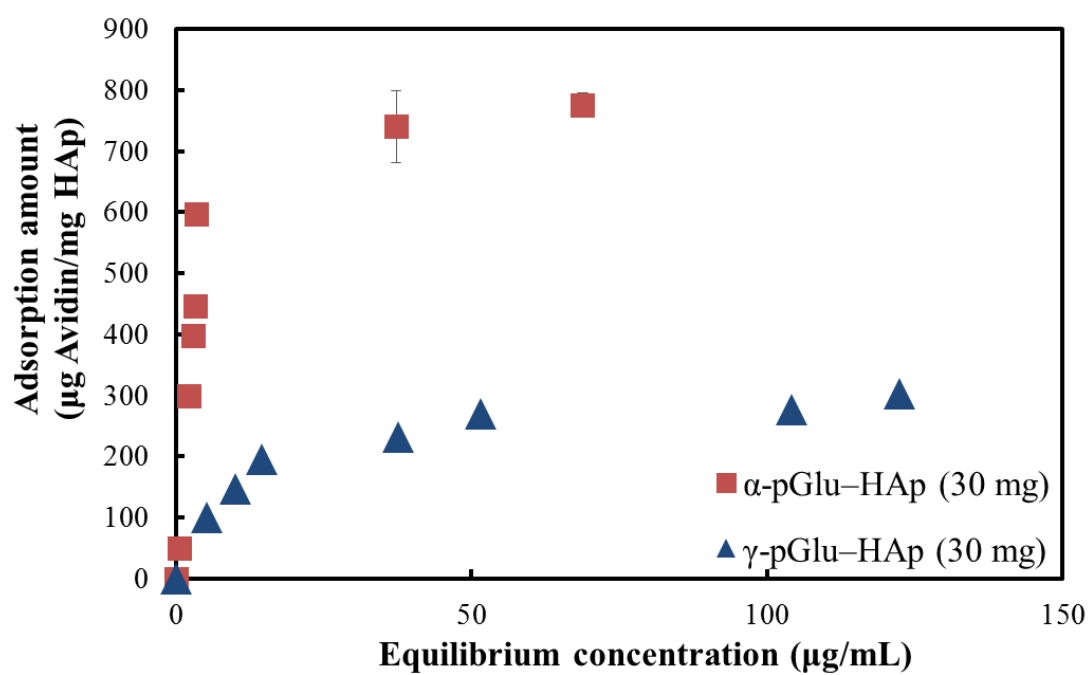


Fig. S5 Adsorption isotherms for avidin on  $\alpha$ -pGlu-HAp (30 mg) and  $\gamma$ -pGlu-HAp (30 mg).