Electronic Supplementary Information

Folic acid conjugated carbon dots as green fluorescent probe based on cellular targeting imaging for recognizing cancer cells

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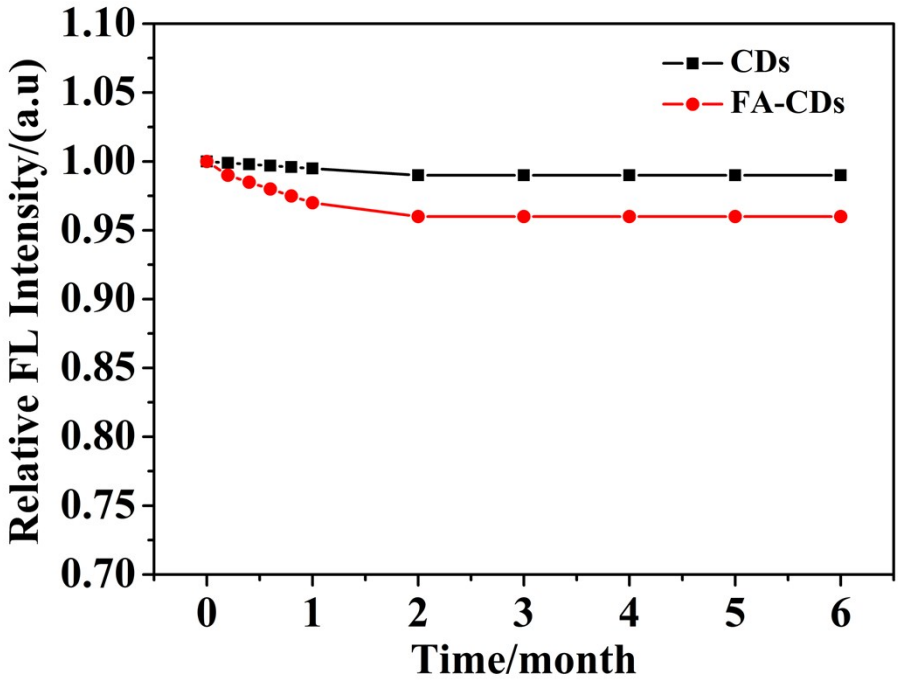

Fig. S1 The photostability of CDs and FA-CDs when stored at 4 °C respectively.

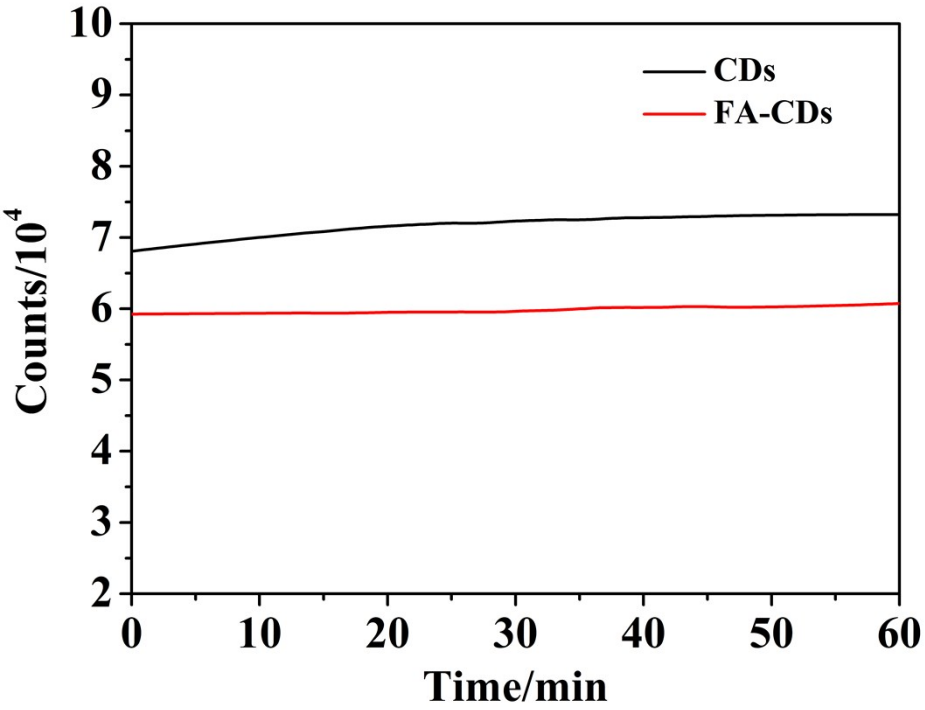

Fig. S2 Effect of time under illumination on the PL intensity of CDs and FA-CDs.

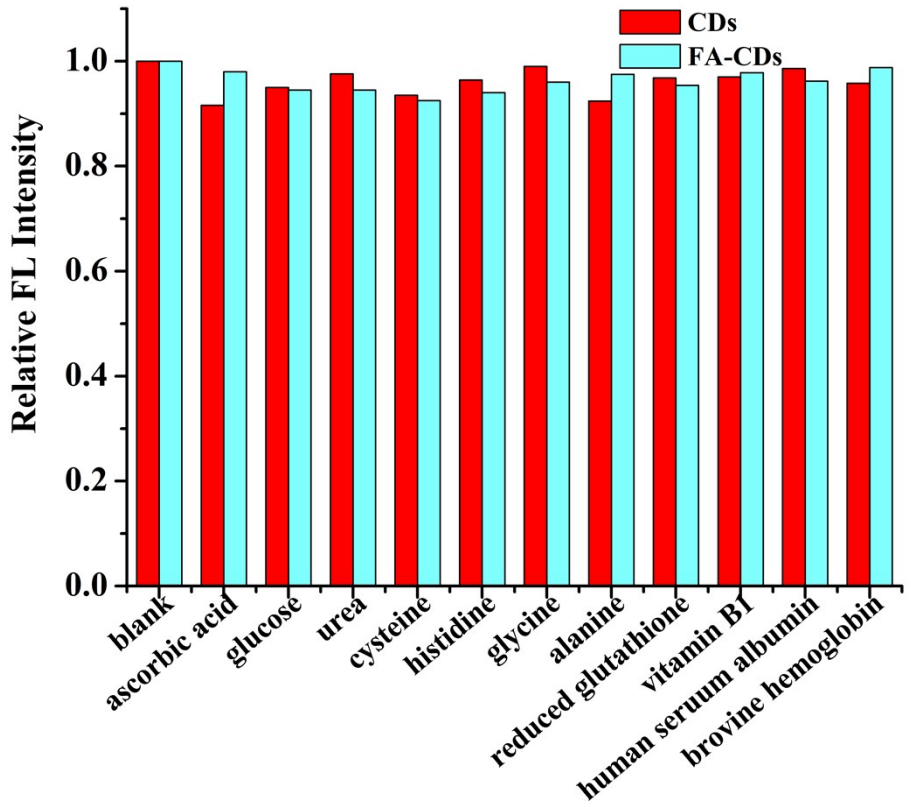

Fig. S3 Effects of common cellular substances on the fluorescence of CDs and FA-CDs, respectively. $\lambda_{ex/em}$ = 396/512 nm.

Table S1 Comparison of the performance of folic acid conjugated-fluorescent CDs for recognizing cancer cells

Precursor	Surface modification	Method			Emission fluorescence	Quantum yield (%)	Ref.
		CDs		FA-CDs			
Glucose	TTDDA	Two-step	Microwave	Dehydration coupling	Green	2	[1]
Glucose	PAAS	One-pot	Microwave	Hydrogen	Green	5.4	[2]
ATP	PEI	Two-step	Hydrothermal	Electrostatic interaction	Blue	--	[3]
Carbon fiber powder	PEI	Two-step	Ultrasonic	Dehydration coupling	Green	--	[4]
Ammonium citrate	--	One-pot	Pyrolysis	Dehydration coupling	Blue	9	[5]
Dandelion	EDA	One-pot	Hydrothermal	Dehydration coupling	Green	13.9	This work

Table S2 Comparison with other kinds of carbon dots reported previously about stability and cell imaging. (% represents PL variation value of CDs)

Precursor	Method	Photostability			Cell imaging	Ref.
		Storage (4 °C)	Photobleaching resistance	Substance interference		
Citric acid EDA	Hydrothermal	--	Photobleaching	> 20 %	No	[6]
Glucose glutathione	Hydrothermal	> 10 % (1-month)	< 10 %	> 10 %	No	[7]
Milk	Hydrothermal	> 10 % (6-month)	Little change	--	U87 cells imagng	[8]
Citric acid PEI	Hydrothermal	< 5 %	--	> 10 %	CAL-27 cells imaging	[9]
1,2,4-triaminobenzene	Solvothermal	< 1 % (6-month)	Little change	--	Biolabeling MCF-7 cells	[10]
Dandelion EDA	Hydrothermal	< 1 % (6-month)	< 5 %	< 10 %	Targeting HepG-2 and MCF-7 cancer cell imaging	This work

References

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