Electronic Supplementary Material (ESI) for Analytical Methods.

A novel amplified double-quenching aptasensor for cocaine detection based on split aptamer and silica nanoparticles

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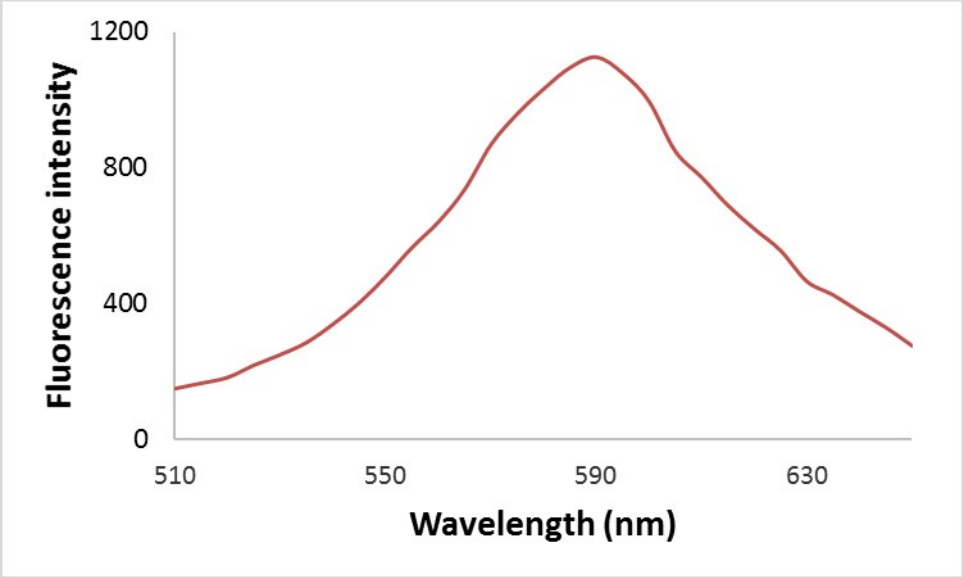
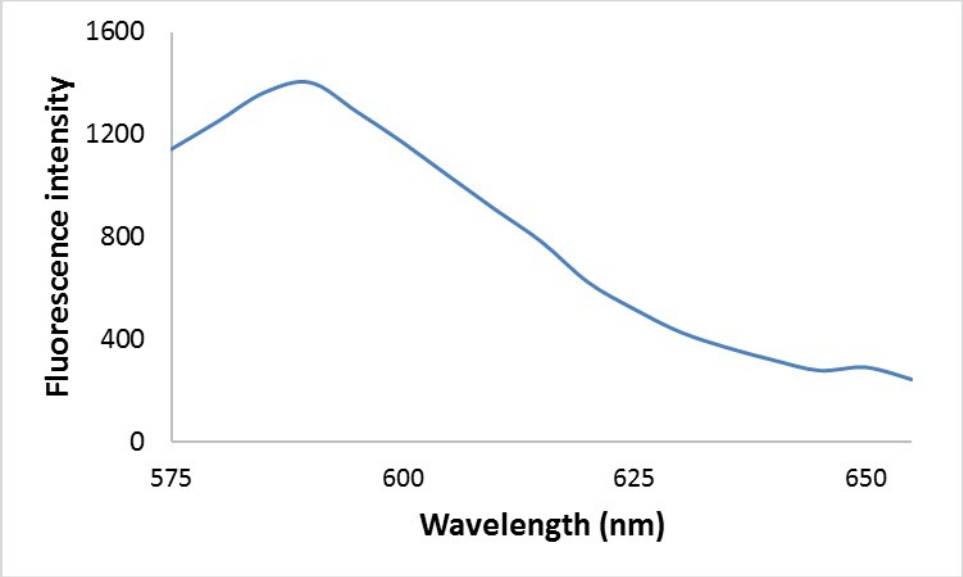
a)


1200
800
400
0
Fluorescence intensity
510
550
590
630
Wavelength (nm)

b)


1600
1200
800
400
0
Fluorescence intensity
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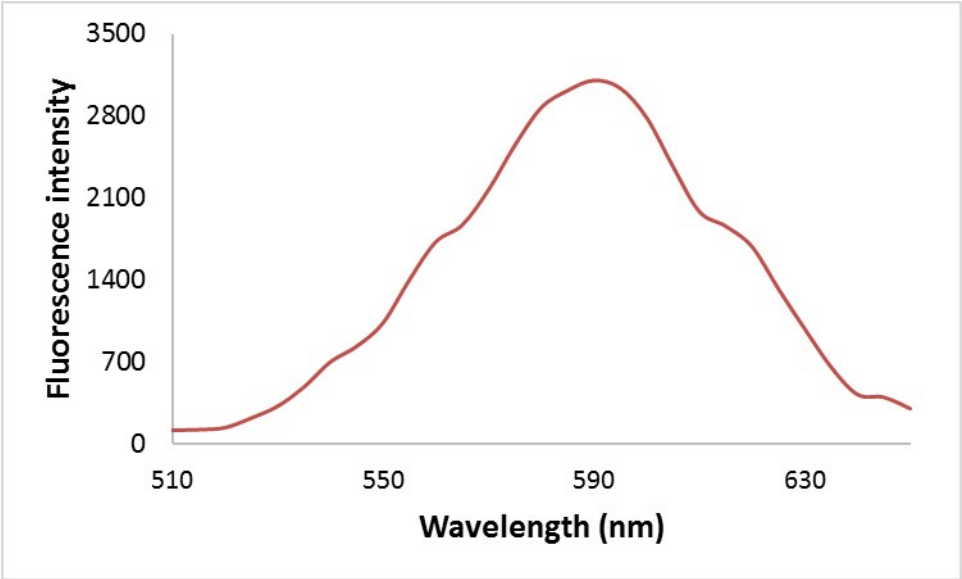
600
625
650
Wavelength (nm)

c)



d)

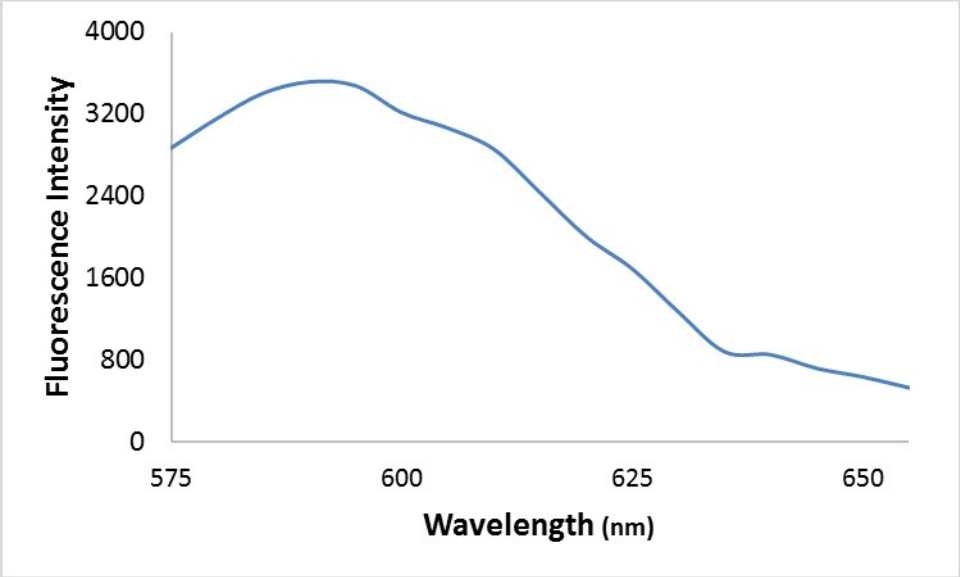


Fig. S1. Fluorescence spectra of various fluorophores (FAM and TAMRA) in the absence and presence of cocaine (80 nM). (a) Fluorescence spectra of the aptasensor in the absence of target with λ_{Ex}= 490 nm which is specific for FAM. The emission of FAM (λ_{Em}= 520 nm) was measured to be about 182. (b) Fluorescence spectra of the aptasensor in the absence of target with λ_{Ex}= 555 nm which is specific for TAMRA. The emission of TAMRA (λ_{Em}= 590 nm) was measured to be about 1400. (c) Fluorescence spectra of the aptasensor in the presence of target with λ_{Ex}= 490 nm which is specific for FAM. The emission of FAM (λ_{Em}= 520 nm) was measured to be about 140. (d) Fluorescence spectra of the aptasensor in the presence of target with λ_{Ex}= 555 nm which is specific for TAMRA. The emission of TAMRA (λ_{Em}= 590 nm) was measured to be about 3500.