## **Supplementary Material**

# Structural and biochemical studies of actin in complex with synthetic macrolides-tail analogs

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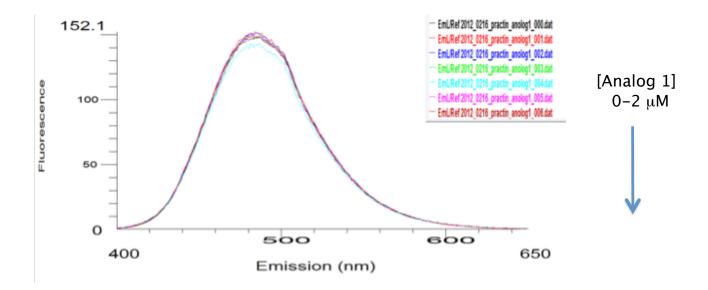
- Fig S1: Emission spectra of Prodan-G-actin as a function of [Analog 1]
- Fig S2: Emission spectra of Prodan-G-actin as a function of [Analog 2]
- Fig S3: Emission spectra of Prodan-G-actin as a function of [KabC]
- Fig S4: Emission spectra of Prodan-G-actin in the presence of DMF
- Fig S5: Emission spectra of Prodan-G-actin as a function of [SF-01] and

titration data

Fig S6: Emission spectra of Prodan-G-actin as a function of [SF-01] and and titration data

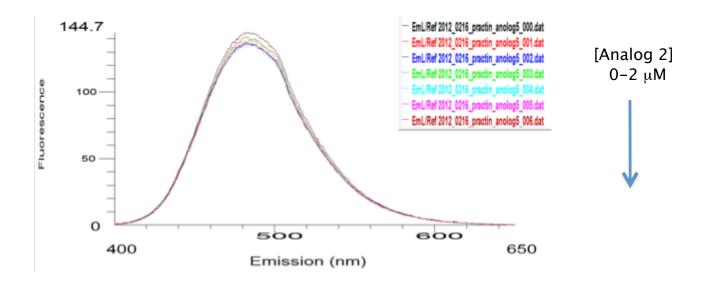
#### Structure of Analog 1

### Stoichiometric binding study of Analog 1 (0-2 $\mu$ M) to Prodan-G-actin (1 $\mu$ M)

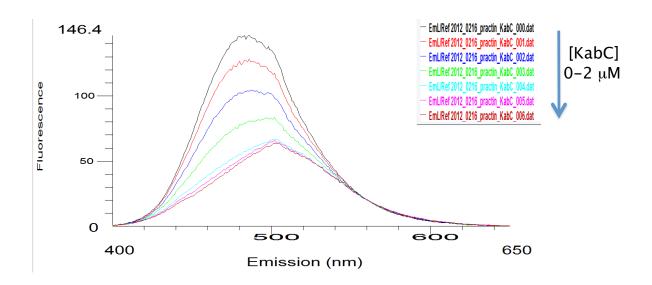


## Structure of Analog 2

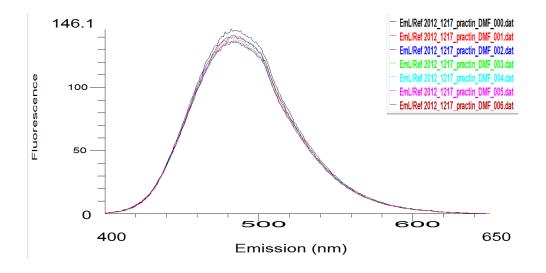
#### Stoichiometric binding study of Analog 2 (0-2 $\mu$ M) to Prodan-G-actin (1 $\mu$ M)



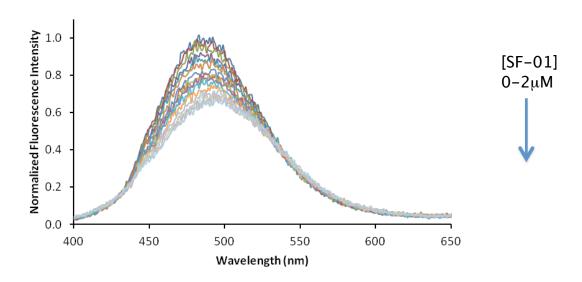
#### Stoichiometric binding study of KabC (0-2 $\mu$ M) to Prodan-G-actin (1 $\mu$ M)



#### Effect of DMF (solvent) on the emission of 1 $\mu$ M Prodan-G-actin

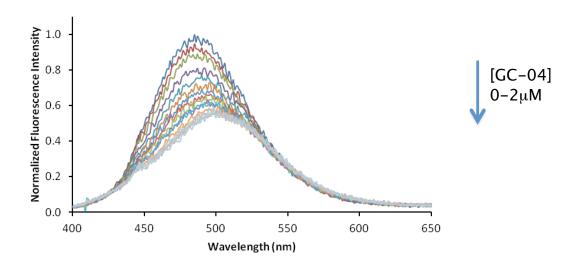


## Equilibrium binding of SF-01 to 200 nM Prodan-G-actin



[SF-01]	nM	SF-01 Integrated Intensity
0		89.76062146
20		88.36692392
50		87.05339746
100		84.67808965
150		83.867188
200		82.08230519
250		79.22343035
300		77.45858019
350		77.03021842
400		76.67993842
500		75.269298
750		74.08762135
1000		72.89847692
1250		71.09848738
1500		71.59781923
1750		71.12894454
2000		70.87114654

## Equilibrium binding of GC-04 to 200 nM Prodan-G-actin



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Titration results			
[GC-04] nM	GC-04 Integrated Intensity		
0	86.7963132		
20	82.90088825		
50	80.42456299		
100	75.21810251		
150	71.67034331		
200	68.76176046		
250	66.83001179		
300	65.40357132		
350	64.17317011		
400	62.26618536		
500	62.07579096		
750	60.40362045		
1000	59.62705922		
1250	59.31448987		
1500	59.42065636		
1750	59.77825469		
2000	59.37938099		