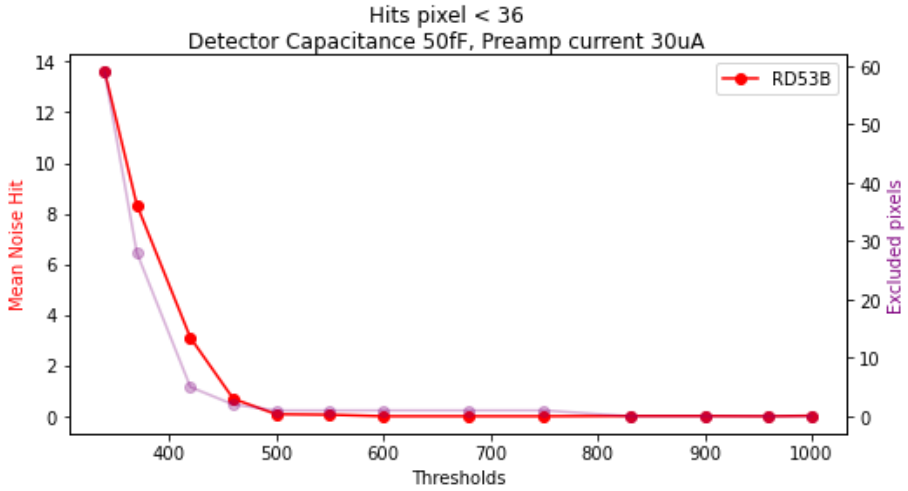
In [1]:
```
import matplotlib.pyplot as plt
```

In [7]:
```
def plotNoiseHitMedio(noise_hit_medio,num_pixel_esclusi,soglie, title, tpe):
    fig, ax  = plt.subplots(figsize= (8,4))
    fig.suptitle(title)
    ax.plot(soglie, noise_hit_medio, marker= "o", color = "red")
    ax.set_xlabel("Thresholds")
    ax.set_ylabel("Mean Noise Hit", color = "red")

    ax2 = ax.twinx()
    ax2.plot(soglie, num_pixel_esclusi, marker = "o", color = "purple", alpha = .3)
    ax2.set_ylabel("Excluded pixels", color="purple")

    ax.legend([(tpe)])

    plt.savefig('NoiseHit medio', bbox_inches='tight')

    plt.show()
```

RD53B 50 fF 30 uA

In [8]:
```
B50_noise_hit_medio = [0.02, 0, 0.01 ,0.01 ,0 ,0 ,0 ,0.06 ,0.08 ,0.69 ,3.1,8.35,13.6]
B50_num_pixel_esclusi = [0,0,0,0,1,1,1,1,1,2,5,28,59]
B50_soglie = [1000, 960, 900, 830, 750, 680, 600, 550, 500, 460, 420, 370, 340]
```

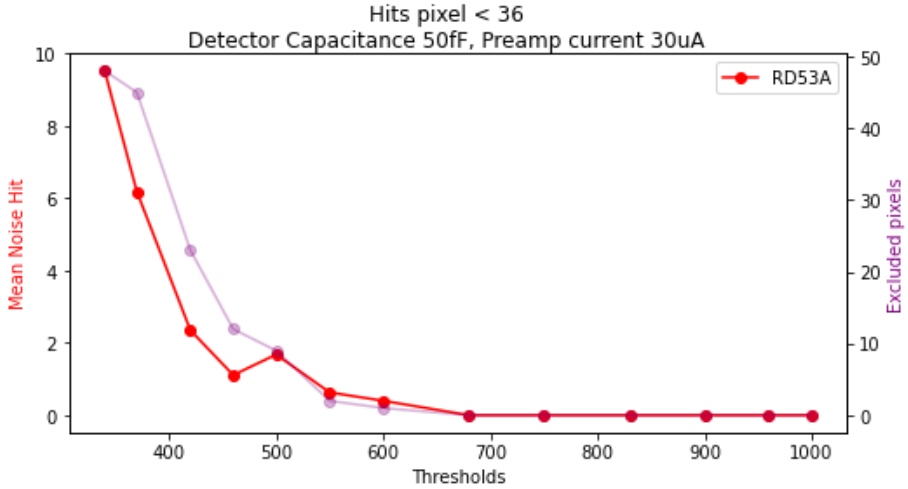
In [9]:
```
plotNoiseHitMedio(B50_noise_hit_medio,B50_num_pixel_esclusi,B50_soglie, "Hits pixel < 36\nDetector Capacitance
```



RD53A 50 fF 30 uA

In [10]:
```
A50_noise_hit_medio = [0,0,0,0,0,0,0.4,0.63,1.68,1.11,2.35,6.19,9.53]
A50_num_pixel_esclusi = [0,0,0,0,0,0,0,1,2,9,12,23,45,48]
A50_soglie = [1000, 960, 900, 830, 750, 680, 600, 550, 500, 460, 420, 370, 340]
```

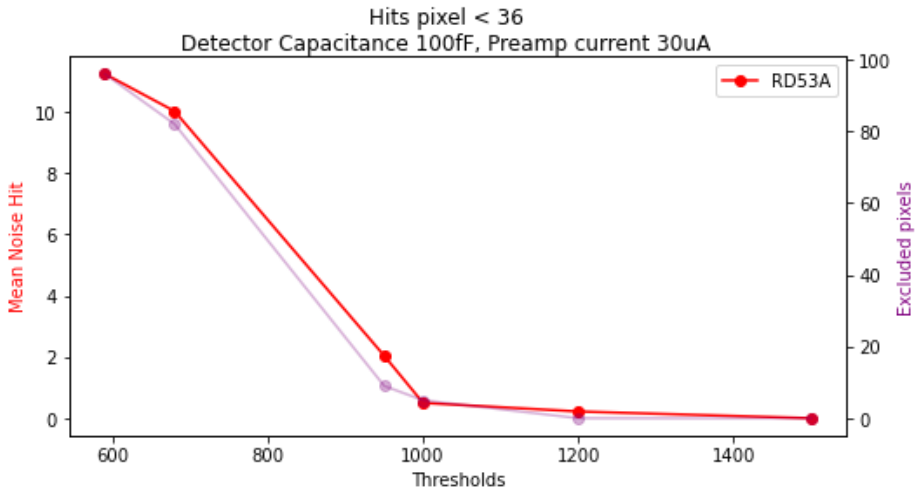
In [11]:
```
plotNoiseHitMedio(A50_noise_hit_medio,A50_num_pixel_esclusi,A50_soglie, "Hits pixel < 36\nDetector Capacitance
```



RD53A 100 fF 30 uA

In [12]:
```
A100_30_noise_hit_medio = [0,0.22,0.5,2.04,10.03,11.25]
A100_30_num_pixel_esclusi = [0,0,5,9,82,96]
A100_30_soglie = [1500,1200,1000,950,680,590]
```

In [13]:
```
plotNoiseHitMedio(A100_30_noise_hit_medio,A100_30_num_pixel_esclusi,A100_30_soglie, "Hits pixel < 36\nDetector
```

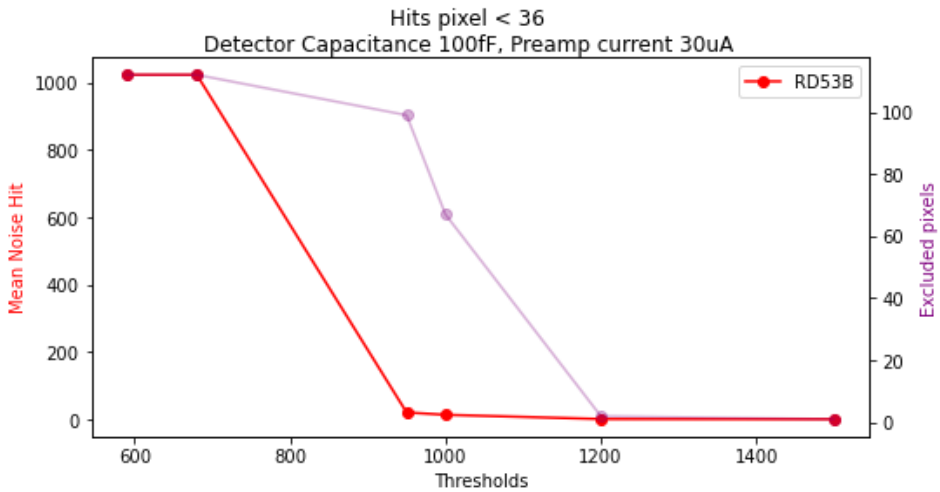


RD53B 100 fF 30 uA

Non ci sono pixel che abbiano hit count inferiore a 36 per le soglie 680 e 590

In [14]:
```
B100_30_noise_hit_medio = [0.01,0.54,13.13,20.23, 1023,1023]
B100_30_num_pixel_esclusi = [1,2,67,99,112,112]
B100_30_soglie = [1500,1200,1000,950,680,590]
```

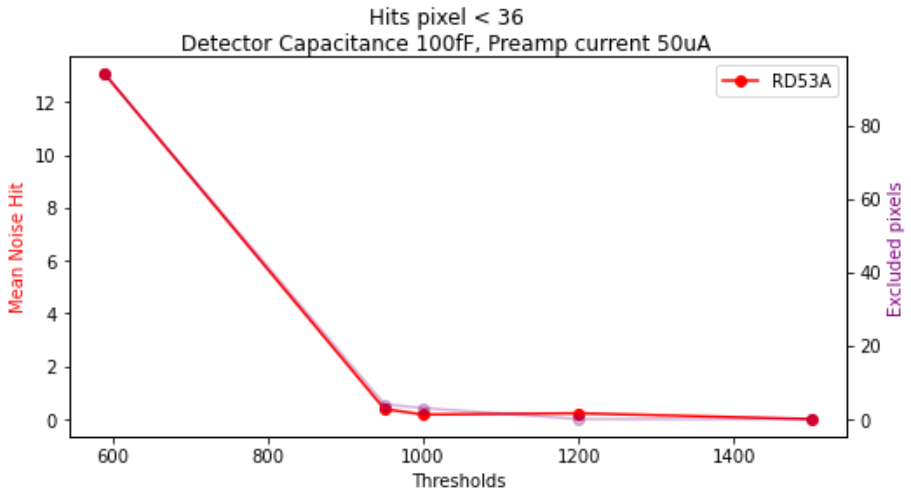
In [15]:
```
plotNoiseHitMedio(B100_30_noise_hit_medio,B100_30_num_pixel_esclusi,B100_30_soglie, "Hits pixel < 36\nDetector
```



RD53A 100 fF 50 uA

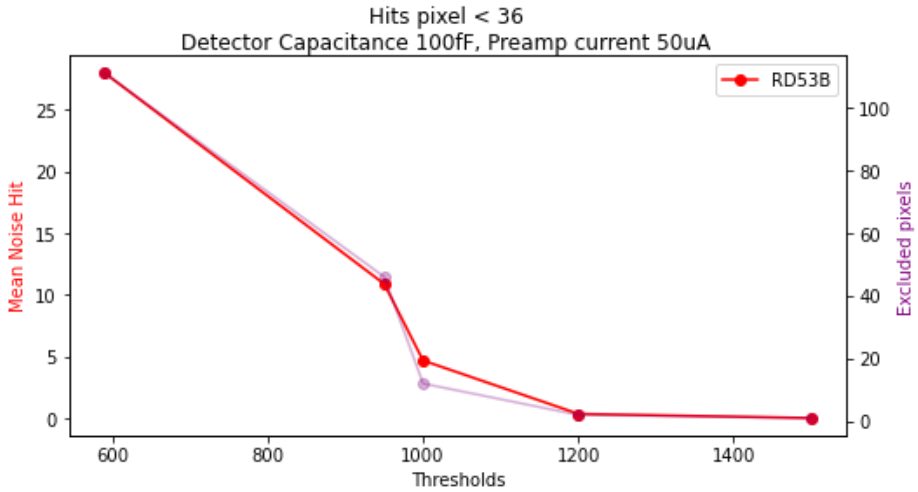
In [16]:
```
A100_50_noise_hit_medio = [0,0.22,0.17,0.38,13.06]
A100_50_num_pixel_esclusi = [0,0,3,4,94]
A100_50_soglie = [1500,1200,1000,950,590]
```

In [17]:
```
plotNoiseHitMedio(A100_50_noise_hit_medio,A100_50_num_pixel_esclusi,A100_50_soglie, "Hits pixel < 36\nDetector
```



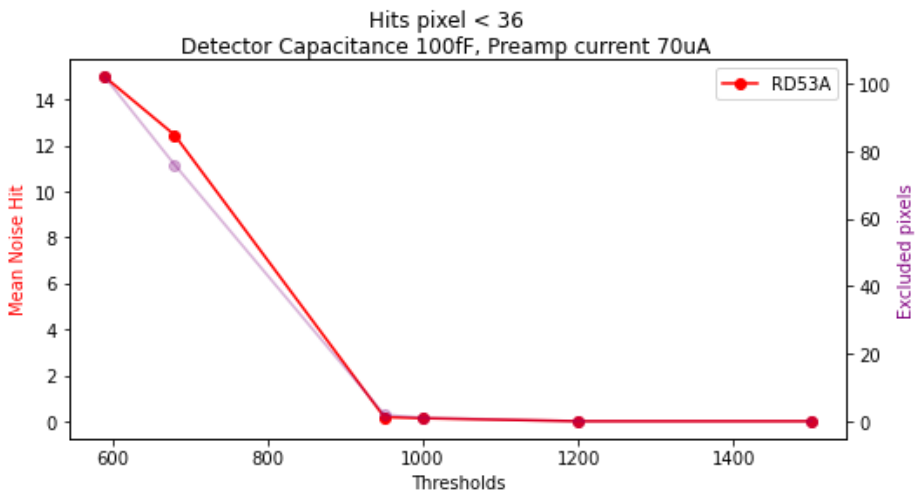
RD53B 100 fF 50 uA

In [18]:
```
B100_50_noise_hit_medio = [0,0.34,4.67,10.88,28]
B100_50_num_pixel_esclusi = [1,2,12,46,111]
B100_50_soglie = [1500,1200,1000,950,590]
plotNoiseHitMedio(B100_50_noise_hit_medio,B100_50_num_pixel_esclusi,B100_50_soglie, "Hits pixel < 36\nDetector
```



RD53A 100 fF 70 uA

In [19]:
```
A100_70_noise_hit_medio = [0,0,0.13,0.18,12.47,15]
A100_70_num_pixel_esclusi = [0,0,1,2,76,102]
A100_70_soglie = [1500,1200,1000,950,680,590]
plotNoiseHitMedio(A100_70_noise_hit_medio,A100_70_num_pixel_esclusi,A100_70_soglie, "Hits pixel < 36\nDetector
```



RD53B 100 fF 70 uA

In [20]:
```
B100_70_noise_hit_medio = [0.15,0.37,5.08,14.74,4,33]
```

```
B100_70_num_pixel_esclusi = [0,1,14,69,111,111]
B100_70_soglie = [1500,1200,1000,950,680,590]
plotNoiseHitMedio(B100_70_noise_hit_medio,B100_70_num_pixel_esclusi,B100_70_soglie, "Hits pixel < 36\nDetector
```