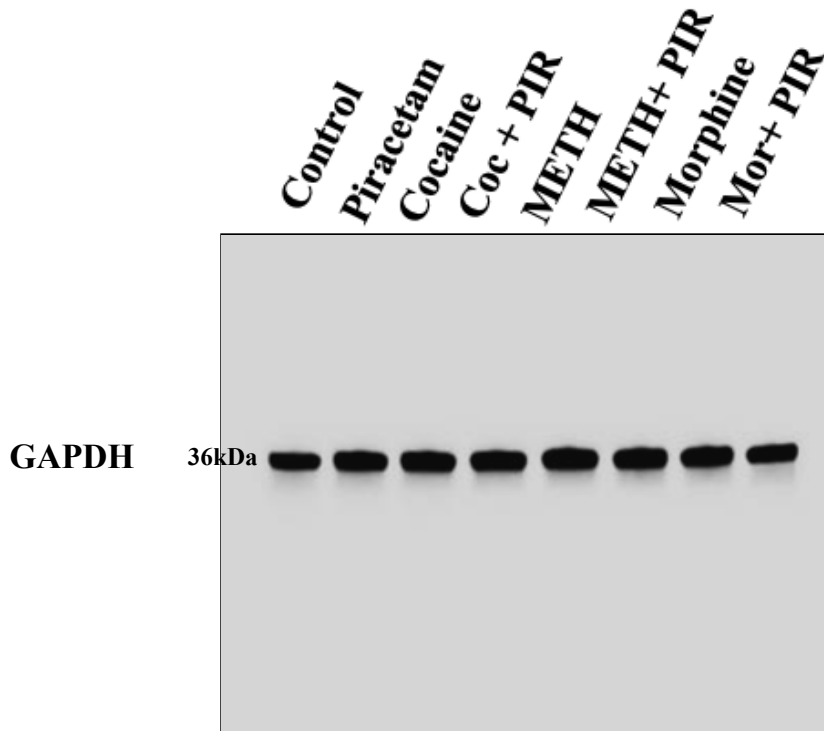


**Figure 4 A: Protective Effect of piracetam against psychostimulants and opioids on SIRT-1 in human primary astrocytes.**

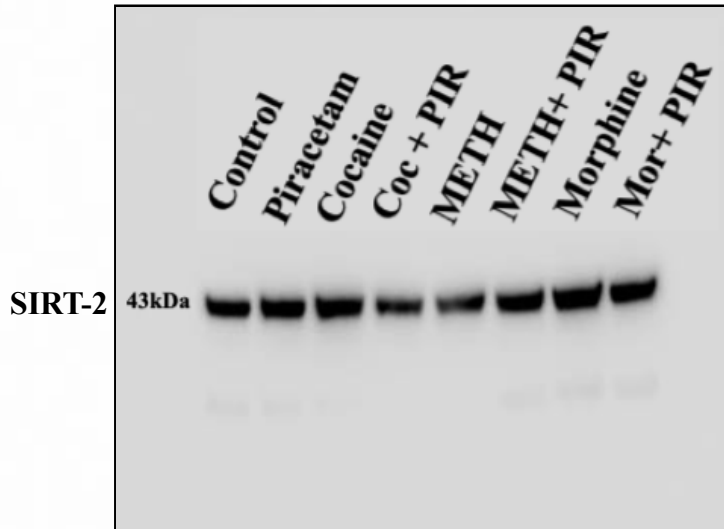
**The representative blot shows SIRT-1 protein level in control, cocaine (1  $\mu$ M), METH (10  $\mu$ M) and morphine (5  $\mu$ M) alone or in combination with piracetam (10  $\mu$ M)**



**Figure 4 A: GAPDH for SIRT-1 in human primary astrocytes.**  
The representative blot shows GAPDH for SIRT-1 in control, cocaine (1  $\mu\text{M}$ ), METH (10  $\mu\text{M}$ ) and morphine (5  $\mu\text{M}$ ) alone or in combination with piracetam (10  $\mu\text{M}$ )

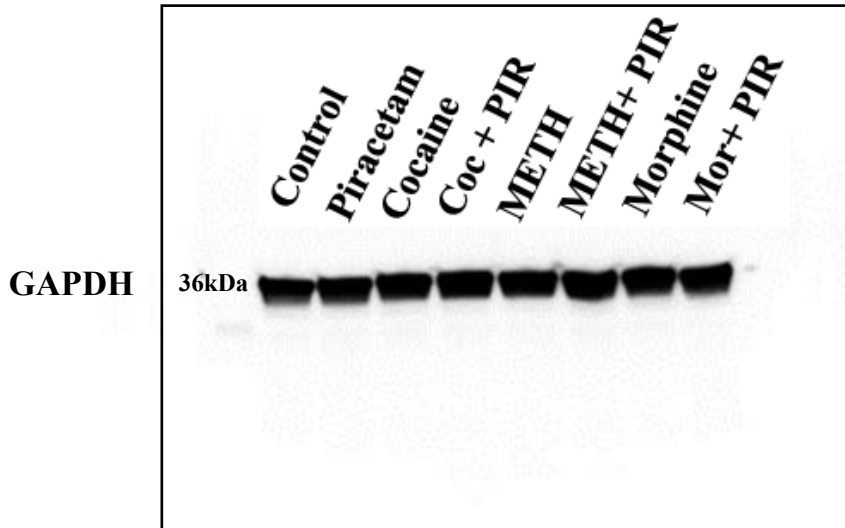
## Figure 4

B



**Figure 4 B: Protective Effect of piracetam against psychostimulants and opioids on SIRT-2 in human primary astrocytes.**

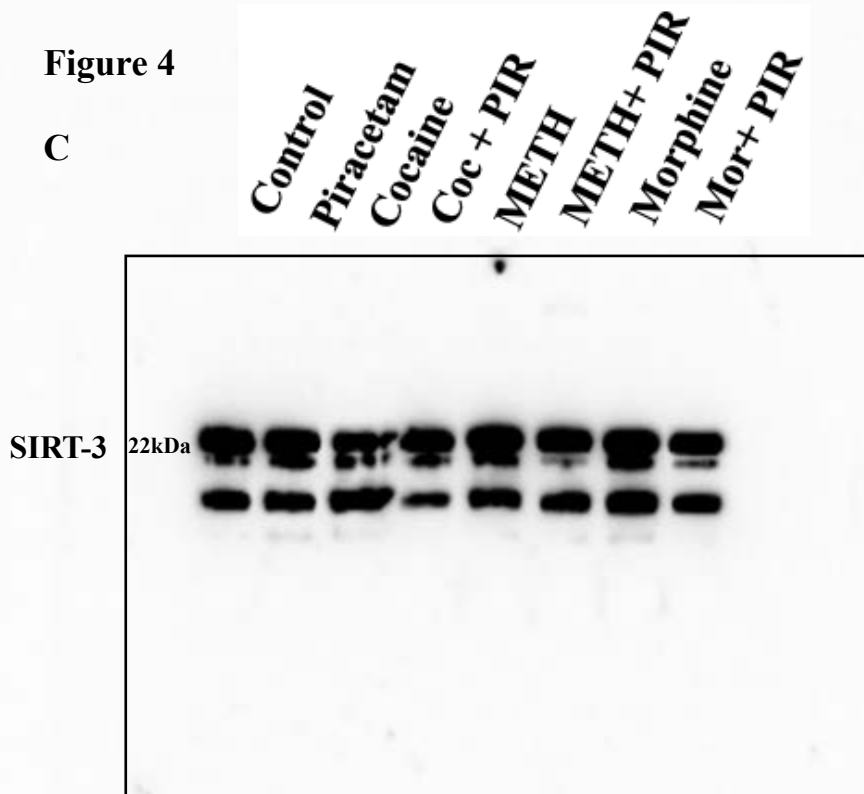
The representative blot shows SIRT-2 protein level in control, cocaine (1  $\mu\text{M}$ ), METH (10  $\mu\text{M}$ ) and morphine (5  $\mu\text{M}$ ) alone or in combination with piracetam (10  $\mu\text{M}$ )



**Figure 4 B: GAPDH for SIRT-2 in human primary astrocytes.**  
The representative blot shows GAPDH for SIRT-2 in control, cocaine (1  $\mu\text{M}$ ), METH (10  $\mu\text{M}$ ) and morphine (5  $\mu\text{M}$ ) alone or in combination with piracetam (10  $\mu\text{M}$ )

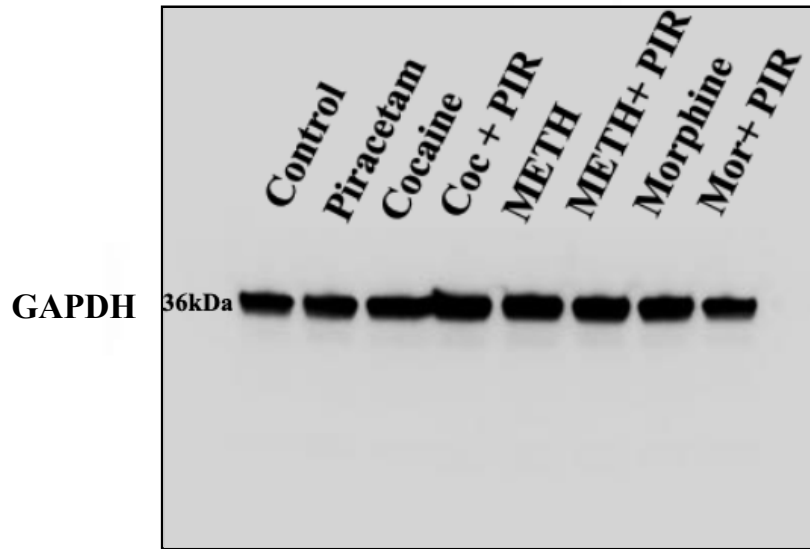
**Figure 4**

**C**



**Figure 4 C: Protective Effect of piracetam against psychostimulants and opioids on SIRT-3 in human primary astrocytes.**

The representative blot shows SIRT-3 protein level in control, cocaine (1  $\mu$ M), METH (10  $\mu$ M) and morphine (5  $\mu$ M) alone or in combination with piracetam (10  $\mu$ M)



**Figure 4 C: GAPDH for SIRT-3 in human primary astrocytes.**  
The representative blot shows GAPDH for SIRT-3 in control, cocaine (1  $\mu\text{M}$ ), METH (10  $\mu\text{M}$ ) and morphine (5  $\mu\text{M}$ ) alone or in combination with piracetam (10  $\mu\text{M}$ )