

## Supplementary information

### **KUS121, a valosin-containing protein modulator, attenuates ischemic stroke via preventing ATP depletion**

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### **Inventory of Supplementary Information**

Supplementary Figure S1-4 and figure legends

## **Supplementary figure legends**

### **Supplementary Figure S1**

(a) Western blot analyses of rat primary cortical neuron and oligodendrocyte lysates for Neuronal Nuclei (NeuN) and myelin basic protein (MBP). (b) Left: microtubule-associated protein 2 (MAP2) stained rat primary cortical neurons. Right: MBP stained rat primary cortical oligodendrocyte. Scale bar: 50  $\mu\text{m}$ . (c) Western blot analyses of cerebral cortex lysates for Neurofilament heavy polypeptide (NF-H) and Glutathione S-transferase pi (GST- $\pi$ ). The cerebral cortex of B-17 mice was collected 24 h after transient occlusion of the distal MCA. The ratio of NF-H or GST- $\pi$  to  $\beta$ -actin expression levels was calculated ( $n = 4$ ; \*,  $p < 0.05$ ).

### **Supplementary Figure S2**

(a) Cell viability measured by WST (water-soluble tetrazolium salt) assay. Rat primary cortical neurons were exposed to oxygen glucose deprivation (OGD) for 2 h, 4 h or 6 h. (b) Rotarod retention time and (c) the time to remove an adhesive tape of C57BL/6 mice subjected to transient occlusion of the distal portion of left middle cerebral artery (MCA). Neurological function was measured by the accelerating rotarod apparatus and adhesive removal test 1 d, 2 d, 3 d and 7 d after occlusion of the distal MCA ( $n = 16$ ).

### **Supplementary Figure S3**

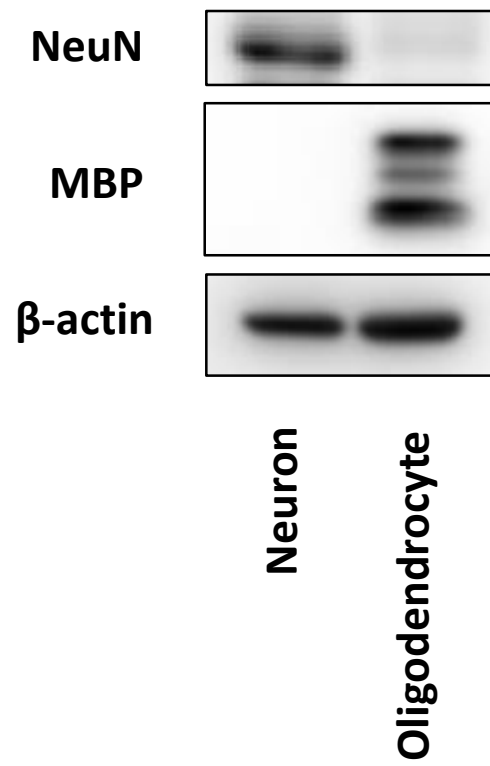
Original Western blots of trimmed panels in Figure 2b (a), Figure 3e (b), Figure 4a (c).

### **Supplementary Figure S4**

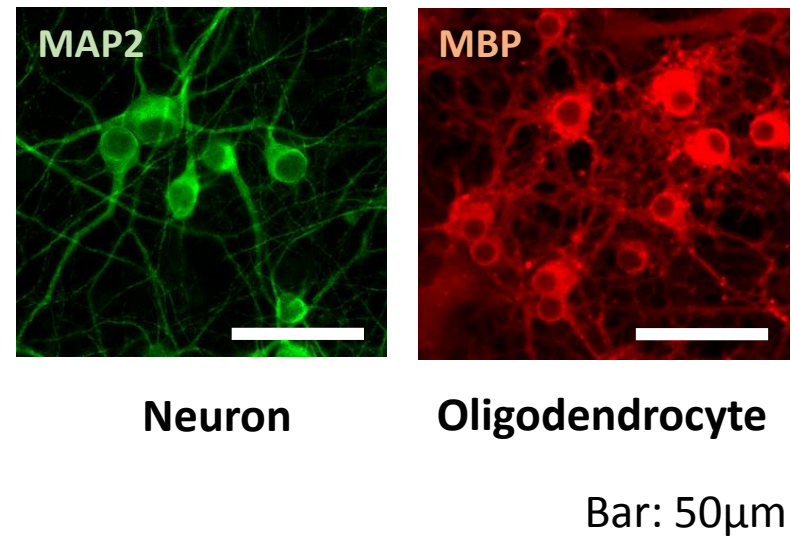
Original Western blots of trimmed panels in Supplementary Figure S1a (a), Supplementary Figure S1c (b).

# Supplementary Figure S1

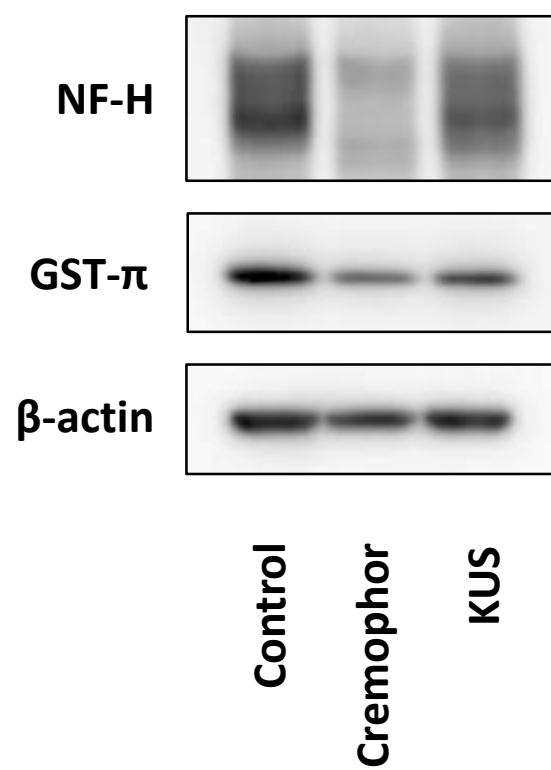
(a)



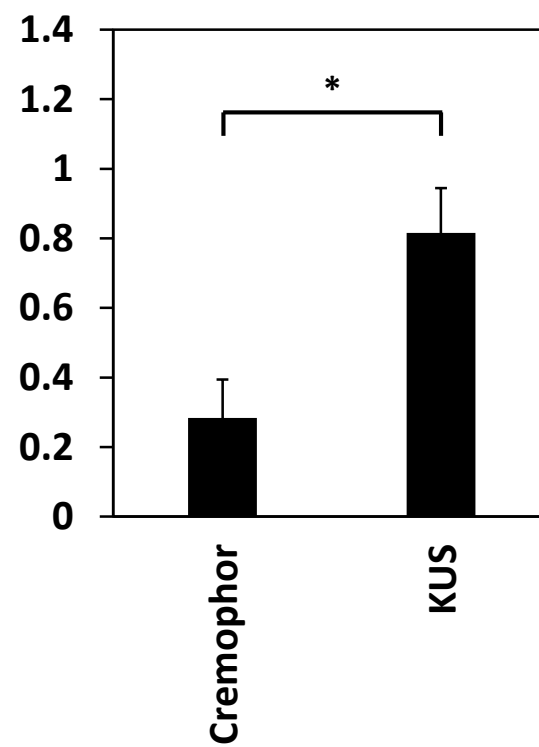
(b)



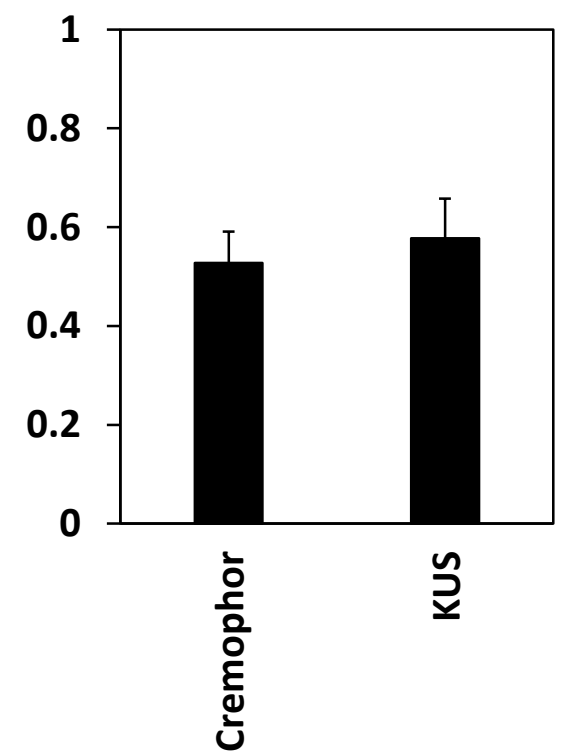
(c)



NF-H /  $\beta$ -actin expression  
(normalized by normal cortex)

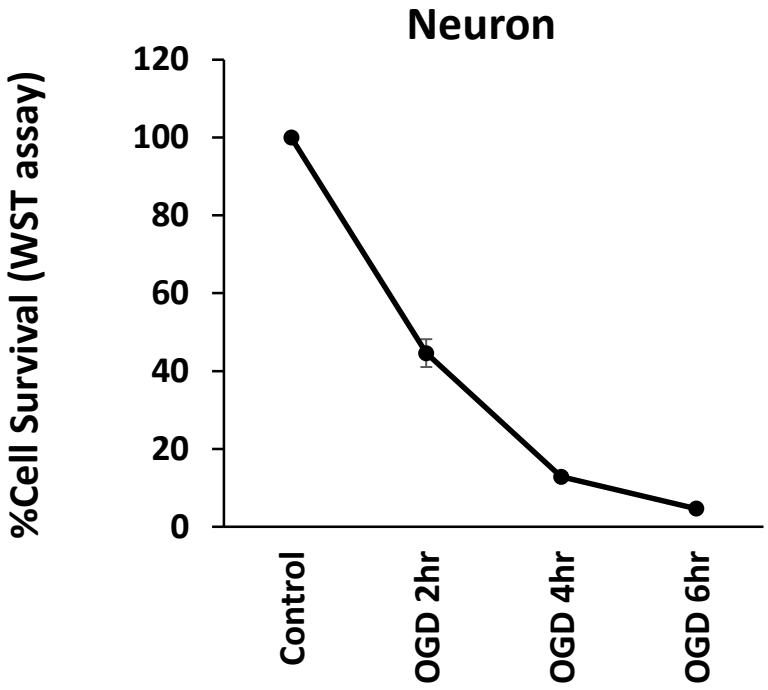


GST- $\pi$  /  $\beta$ -actin expression  
(normalized by normal cortex)

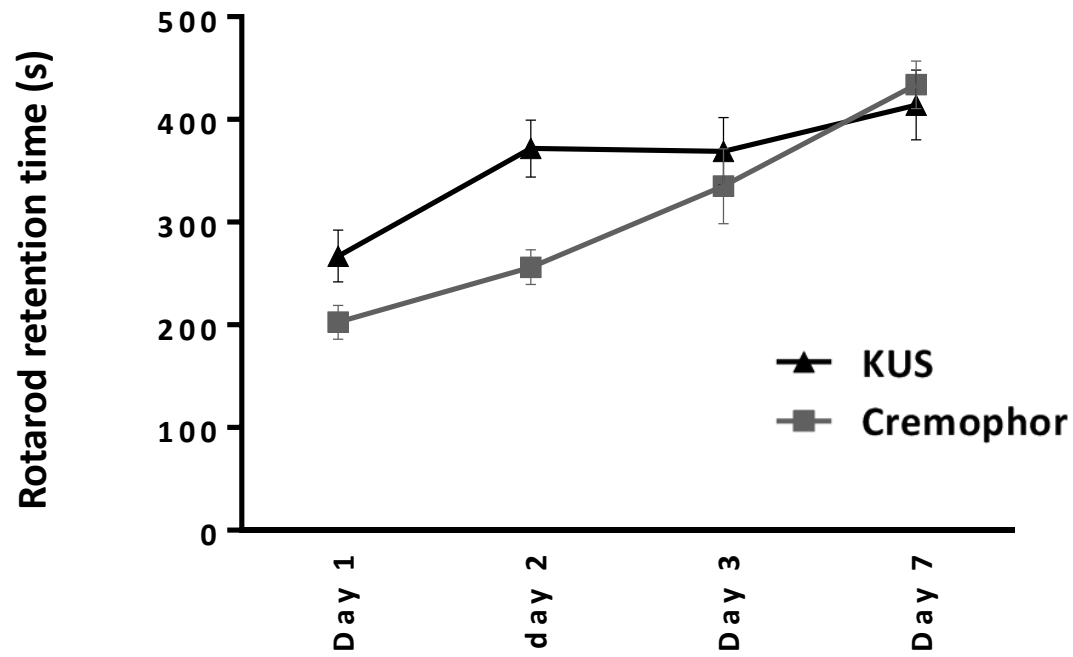


# Supplementary Figure S2

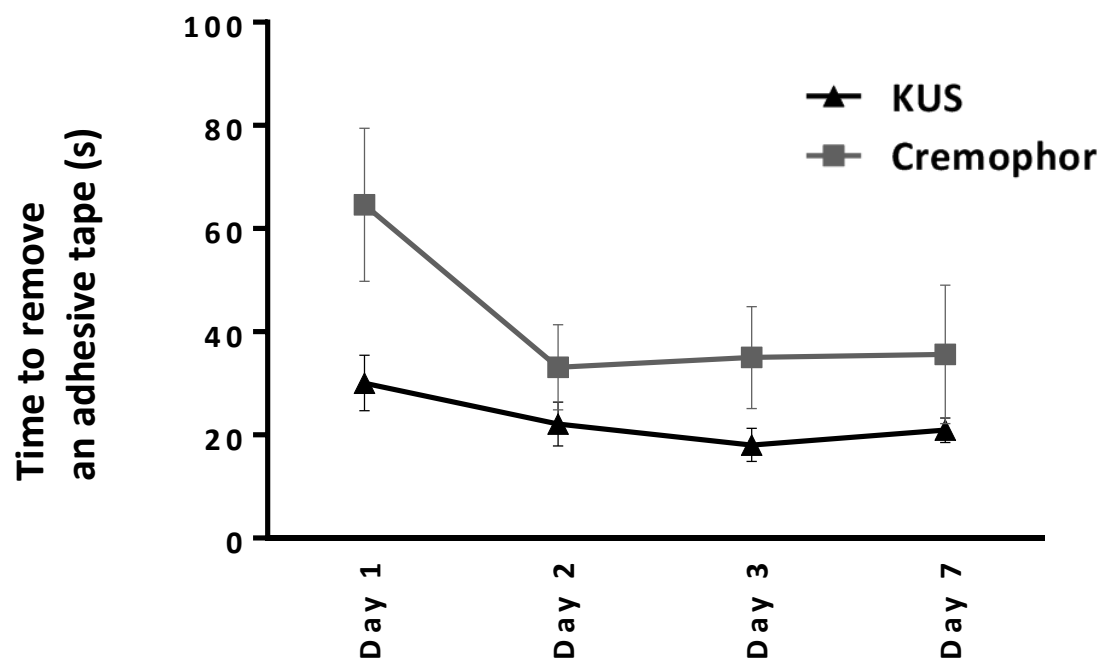
(a)



(b)

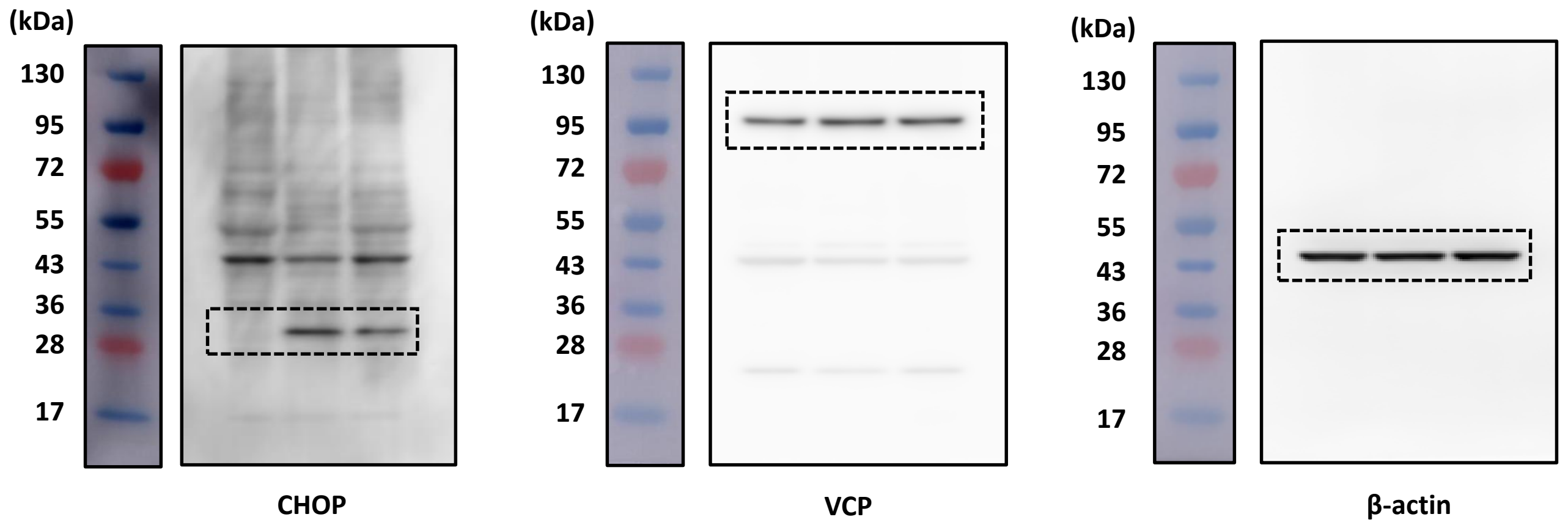


(c)

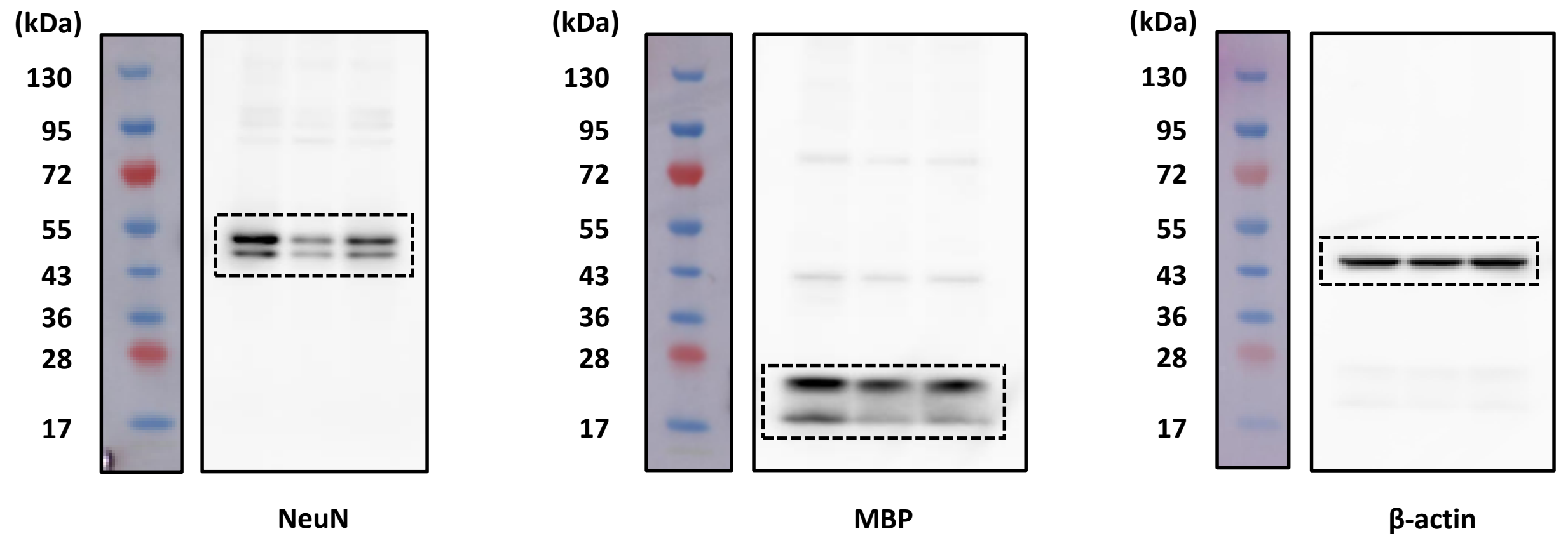


# Supplementary Figure S3

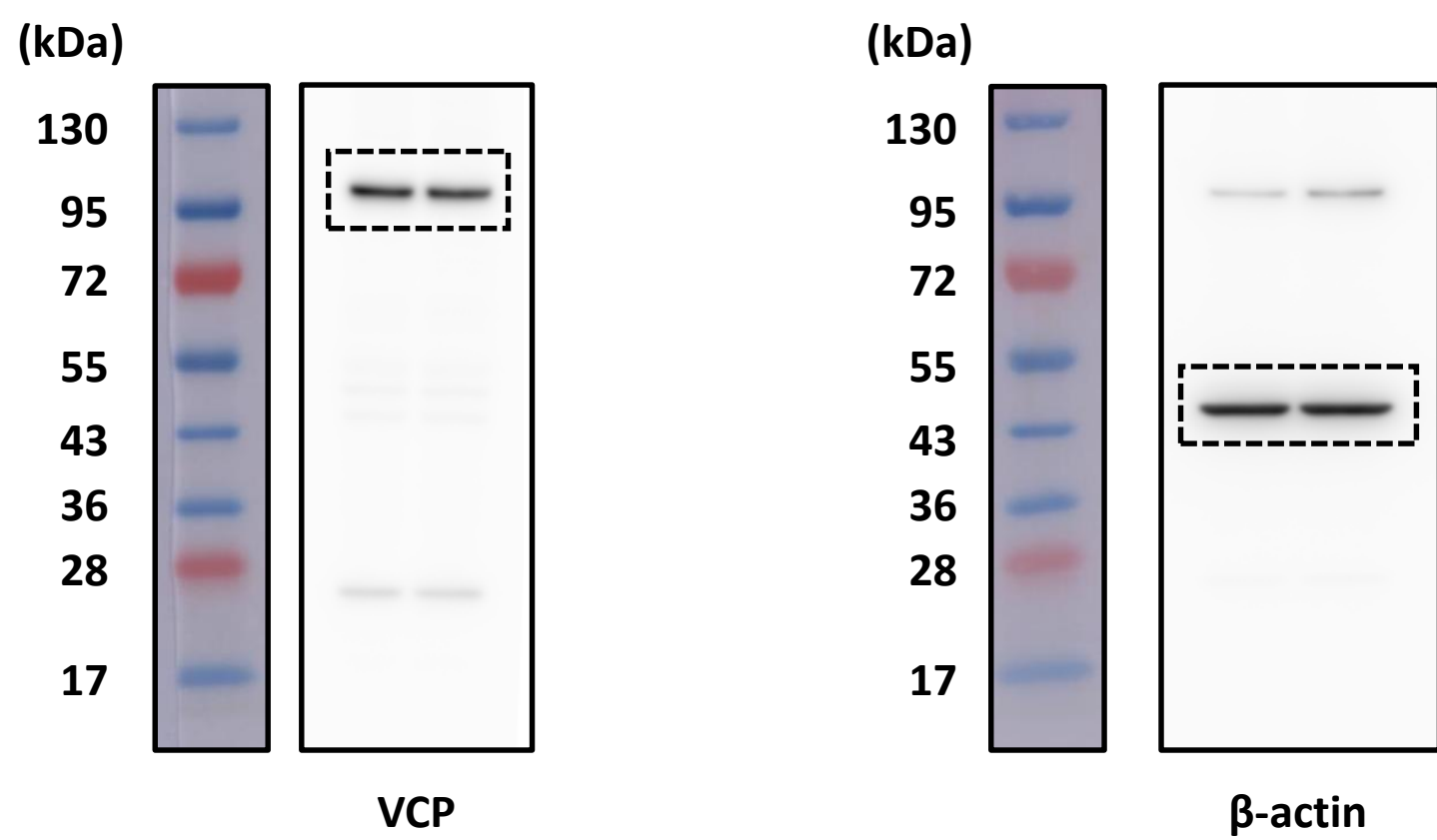
## (a) Figure 2b



## (b) Figure 3e

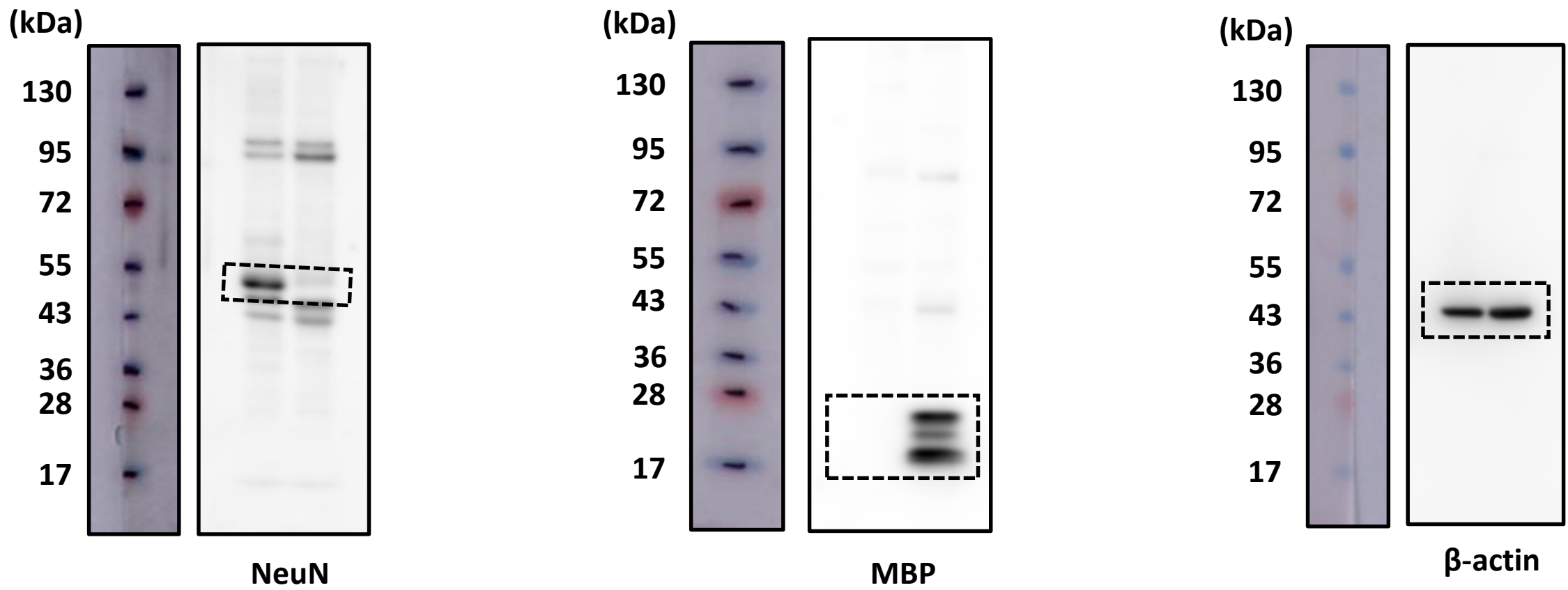


## (c) Figure 4a



## Supplementary Figure S4

### (a) Supplementary Figure S1a



### (b) Supplementary Figure S1c

