We have uploaded original and unedited images for all blots used to generate the figures (see follows). The protein marker we used in the western blotting assays were non-luminescence markers, accordingly, the protein ladder bands were not detected on the PVDF membranes. However, we usually detected different proteins on the same PVDF membrane for more efficient. To obtain the target proteins, the strips will be cut after blocking according to the protein ladder.

| Figure 5K-L | WT-CON | WT-HFD | KO-CON | KO-HFD |
| :---: | :---: | :---: | :---: | :---: |
| number | $\# 1$ | $\# 2$ | $\# 3$ | $\# 4$ |

BDNF (32 kDa):

$\beta$-Tubulin ( 55 kDa ):


BDNF ( 32 kDa ):


Becn1 (52 kDa):


GAPDH (36 kDa):


SQSTM1（62 kDa）：



LC3B（14－16 kDa）：

| 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 | 2 | 3 | 4 | 1 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

$\begin{array}{llllllllllll}1 & 1 & 1 & 2 & 2 & 2 & 2 & 3 & 3 & 3 & 4 & 4\end{array} 4$

| 1 | 2 | 3 | 4 | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

GAPDH（ 36 kDa ）：



| 1 | 1 | 1 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | 4 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

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