



**Supplemental Fig. S6.** Full Western blot for brain protein expressions. p-AMPK, phosphorylated-activated protein kinase; AMPK, activated protein kinase; LC3-II, light chain 3-II; PSD-95, postsynaptic density protein 95; APP, amyloid-beta precursor protein; p-IRS, phosphorylated-insulin receptor substrate 1; IRS, insulin receptor substrate 1; GPX4, glutathione peroxidase 4; p-Tau, phosphorylated-Tau; SOD2, superoxide dismutase 2; TNF- $\alpha$ , tumor necrosis factor- $\alpha$ ; A $\beta$ , amyloid  $\beta$ ; BACE-1, beta-site amyloid precursor protein cleaving enzyme 1; PGC-1 $\alpha$ , peroxisome proliferator-activated receptor gamma coactivator-1 $\alpha$ ; MFN1, mitofusin 1; Bax, Bcl-2-associated X protein; Bcl, B-cell lymphoma; BDNF, brain-derived neurotrophic factor; DCX, doublecortin; MFN2, mitofusin 2; OPA1, optic atrophy 1; p-NF $\kappa$ B, phosphorylated-nuclear factor kappa-light-chain-enhancer of activated B cells; NF $\kappa$ B, nuclear factor kappa-light-chain-enhancer of activated B cells; p-TrkB, phosphorylated-tropomyosin receptor kinase B; TrkB, tropomyosin receptor kinase B; p-DRP1, phosphorylated-dynamamin-related protein 1; DRP1, dynamamin-related protein 1; sRAGE, soluble-receptor for advanced glycation end product; PINK1, PTEN-induced kinase 1; ND, normal diet-fed rats; HFD, high-fat diet-fed rats.