supplementary materials

Protective effects of *Lycium barbarum* L. berry extracts against oxidative stressinduced damages on the retina of aging mouse and ARPE-19 cells

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Fig S1. Regulation effect of LBW-95E on total and nuclear Nrf2 expression in ARPE-19 cells induced by sodium iodate. In this picture, lanes 1 to 6 were used to display the total protein of Nrf2. Lanes 1 to 5 were our target proteins, which corresponded to the control group, sodium iodate group, sodium iodate with 1µg/mL LBW-95E co-culture group, sodium iodate with 3µg/mL LBW-95E co-culture group, sodium iodate with 10µg/mL LBW-95E co-culture group respectively. lanes 7 to 12 were used to display the nucleus protein of Nrf2. Lanes 7 to 11 were our target proteins, which corresponded to the control group, sodium iodate group, sodium iodate with 1µg/mL LBW-95E co-culture group, sodium iodate with 1µg/mL LBW-95E co-culture group, sodium iodate with 3µg/mL LBW-95E co-culture group, sodium iodate with 1µg/mL LBW-95E co-culture group respectively.



Fig S2. Regulation effect of LBW-95E on cytoplasm and nuclear Nrf2 expression in ARPE-19 cells induced by sodium iodate. In this picture, lane 1 to 6 were used to display the cytoplasm protein of Nrf2. Lanes 1 to 5 were our target proteins, which corresponded to the control group, sodium iodate group, sodium iodate with 1µg/mL LBW-95E co-culture group, sodium iodate with 3µg/mL LBW-95E co-culture group respectively. Lanes 7 to 12 were used to display the nucleus protein of Nrf2. Lanes 7 to 11 were our target proteins, which corresponded to the control group, sodium iodate with 1µg/mL LBW-95E co-culture group respectively. Lanes 7 to 12 were used to the control group, sodium iodate group, sodium iodate group, sodium iodate with 1µg/mL LBW-95E co-culture group, sodium iodate with 3µg/mL LBW-95E co-culture group and sodium iodate with 10µg/mL LBW-95E co-culture group respectively.



Fig S3. Regulation effect of LBW-95E on cytoplasm HO-1 expression in ARPE-19 cells induced by sodium iodate. In this picture, lanes 1 to 6 were used to display the cytoplasm protein of HO-1. Lanes 1 to 5 were our target proteins, which corresponded to the control group, sodium iodate group, sodium iodate with 1µg/mL LBW-95E co-culture group, sodium iodate with 3µg/mL LBW-95E co-culture group and sodium iodate with 10µg/mL LBW-95E co-culture group respectively. lanes 7 to 12 were used to display the nucleus HO-1 expression, the loading order was the same as that of the cytoplasm, which was not relevant to our experiment, so lanes 7 to 12 were not shown in the manuscript.



Fig S4. Expression of the nuclear reference protein lamin B1 in ARPE-19 cells induced by sodium iodate. In this picture, lane 7 to 12 were used to display lamin B1 expression in the nucleus. Lanes 7 to 11 were our target proteins, which corresponded to the control group, sodium iodate group, sodium iodate with $1\mu g/mL LBW-95E$ co-culture group, sodium iodate with $3\mu g/mL LBW-95E$ co-culture group and sodium iodate with $10\mu g/mL LBW-95E$ co-culture group respectively. lanes 1 to 6 were used to display the cytoplasm lamin B1 expression, the loading order was the same as that of the nuclear, which was not relevant to our experiment, so lanes 1 to 6 were not shown in the manuscript.



Fig S5. Expression of the cytoplasm reference protein α -tubulin in ARPE-19 cells. In this picture, lanes 1 to 6 were used to display α -tubulin expression in the cytoplasm. Lanes 1 to 5 were our target proteins, which corresponded to the control group, sodium iodate group, sodium iodate with 1µg/mL LBW-95E co-culture group, sodium iodate with 3µg/mL LBW-95E co-culture group and sodium iodate with 10µg/mL LBW-95E co-culture group respectively. lanes 7 to 12 were used to display the nuclear α -tubulin expression, the loading order was the same as that of the cytoplasm, which was not relevant to our experiment, so lanes 7 to 12 were not shown in the manuscript.



Fig S6. Expression of the reference protein gapdh in ARPE-19 cells. In this picture, lane 1 to 6 were used to display gapdh expression in the total protein. Lanes 1 to 5 were our target proteins, which corresponded to the control group, sodium iodate group, sodium iodate with 1μ g/mL LBW-95E co-culture group, sodium iodate with 3μ g/mL LBW-95E co-culture group and sodium iodate with 10μ g/mL LBW-95E co-culture group respectively. lanes 7 to 12 were used to display the nuclear gapdh expression, the loading order was the same as that of the cytoplasm, which was not relevant to our experiment, so lanes 7 to 12 were not shown in the manuscript.