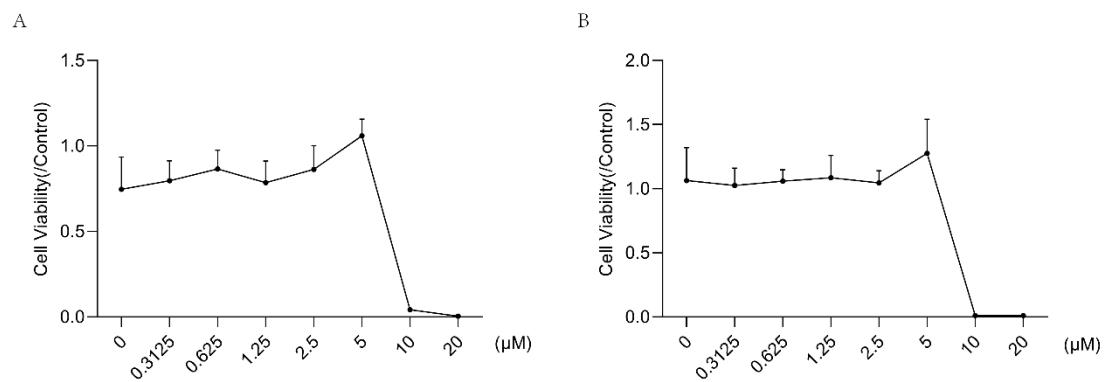


**Figure S1.** RT-qPCR and Western Blot to verify proteomics. **A:** Immunoblot of ApoE, p16 ARC, CDC42, Rac1 and RhoA. **B:** RT-qPCR of RhoA, RPS6, MBP, KIF5A, BMPR2 and Rictor. **C:** Quantification of ApoE immunoblots. **D:** Quantification of p16 ARC immunoblots. **E:** Quantification of CDC42 immunoblots. **F:** Quantification of immunoblot of Rac1. **G:** Quantification of immunoblot of RhoA.



**Figure S2.** Proliferative and toxic effects of different concentrations of AKBA on PC12 cells. **A:** Cell viability of PC12 cells after 12 h of different concentrations of AKBA. **B:** Cell viability of PC12 cells after 24 h of different concentrations of AKBA.

B: cell viability of PC12 cells after 24 h of AKBA.

Table S1 Primer sequence list.

| Target gene | Primer sequence  |
|-------------|--|
| Rho A       | Forward: 5'-AGGATTGGCGCTTTGGGTA-3'<br>Reverse: 3'-ATGAGGCACCCGACTTTT-5'      |
| RPS6        | Forward: 5'-GCGCCTGCTTTGAGTAAGG-3'<br>Reverse: 3'-CAGGTTGGCATCCACAATGC-5'    |
| MBP         | Forward: 5'-CGCAGAGGACCCAAGATGAA-3'<br>Reverse: 3'-AAATCTGCTGAGGGACAGGC-5'   |
| KIF5A       | Forward: 5'-CACGACTCAGGAGCAGGTTT-3'<br>Reverse: 3'-TGGTTGAAGATGTCTCGGGC-5'   |
| BMPR2       | Forward: 5'-CAAGAACGGCTGTGTGCATT-3'<br>Reverse: 3'-CAGACCATAACATGTGCTCCCT-5' |
| Rictor      | Forward: 5'-TGCACCCATCCTTGTCTCAC-3'<br>Reverse: 3'-CTGATTCCCCGACATGCTT-5'    |
| GAPDH       | Forward: 5'-GCATCTTCTTGTGCAGTGCC-3'<br>Reverse: 3'-GATGGTGATGGGTTCCCGT-5'    |