**Figure S1**

(a) Representative immunoblotting of protein extracts, 48 hrs after transfection of KEK293T cells with each of the various pAAV-AMPKα constructs, either alone, or co-transfected with plasmids expressing the β1 and γ3 subunits of the AMPK complex. Immunodetection of phospho-ACC (pACC) and actin.

(b) Quantification of relative pACC levels analyzed by western blotting. The pACC signal is normalized to actin. The pACC level is set at 1 in KEK293T transfected with the control non-coding pAAV plasmid (Ctrl). Note that only the wild-type α1 and α2 subunits change the level of pACC as a function of β1/γ3 subunit expression. The activity of the other subunits appears independent from the β and γ AMPK subunits. Note the significant reduction of the pACC signal in neurons overexpressing the dominant-negative K45Ra2, compared to α2 and 1-310α2 variants.

Values are expressed as mean±SEM. Statistical analysis: two-way factorial ANOVA (AMPKα x β/γ co-expression) with Fisher’s LSD post hoc test; n=2 per condition; *P<0.05, **P<0.01, ***P<0.001.

**Fig S1. Levels of phospho-ACC in HEK293T cells overexpressing AMPKα**

(a) Representative immunoblotting of protein extracts, 48 hrs after transfection of KEK293T cells with each of the various pAAV-AMPKα constructs, either alone, or co-transfected with plasmids expressing the β1 and γ3 subunits of the AMPK complex. Immunodetection of phospho-ACC (pACC) and actin.

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