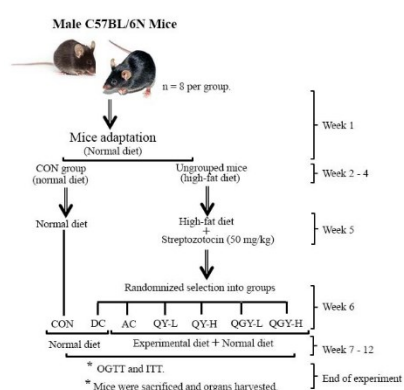


**Figure S1:** Experimental diet protocol of study. CON group: Normal healthy control; DC group: diabetic model control; AC group: Acarbose (3g/kg) + diet treatment; QY-L group: non-germinated quinoa yoghurt (100  $\mu$ L/kg) + diet treatment; QY-H group: non-germinated quinoa yoghurt (300  $\mu$ L/kg) + diet treatment; QGY-L: germinated quinoa yoghurt (100  $\mu$ L/kg) + diet treatment; and QGY-H: germinated quinoa yoghurt (300  $\mu$ L/kg) + diet treatment.



**Table S1:** Formulation of high-fat diet and normal diet

Ingredient	Composition	Quantity of diet composition	
		Normal diet	High-fat diet
Protein [% kcal]	soybean	24	20
Carbohydrate [% kcal]	Bran and corn	65	35
Fat [% kcal]	Vegetable oil	24	45
Vitamins [g]	A, D, E, B, B2 and B6	3	3
Minerals [g]	Calcium, Hydrogen phosphate, stone powder, iron, copper, zinc and magnesium	28	28
Energy density [kcal/g]		3.82	4.73

**Table S2:** Primer sequences for RT-PCR analysis

Gene		Primer sequence
GAPDH	Forward	5' GTCTCCTCTGACTTCAACAGCG 3'
	Reverse	5' ACCACCCTGTTGCTGTAGCCAA 3'
AKT	Forward	5' GTGGCAAGATGTGTATGAG 3'
	Reverse	5' CTGGCTGAGTAGGAGAAC 3'
PI3K	Forward	5' AACACAGAAGACCACTACTC 3'
	Reverse	5' TTCGCCATCTACCACTAC 3'
AMPK	Forward	5' ATCTGTCTCGCCCTCATCCT 3'
	Reverse	5' CCACTTCGCTCTTCTTACACCTT 3'

GADPH - Glyceraldehyde 3-phosphate dehydrogenase; AKT - Protein kinase B (PKB); PI3K -Phosphoinositide 3-kinases; AMPK - AMP-activated protein kinase

**Table S3:** Anti-mouse polyclonal antibodies for western blot analysis

	Dilution	Species	Molecular weight
<i>Primary antibody</i>			
GADPH	1:20000	Immunoway, YM3029	36 kD
<i>Secondary antibodies</i>			
AKT	1:4000	CST, 4691	66 kD
PI3K	1:2000	Immunoway, YM3408	77 kD
AMPK	1:2000	Immunoway, YT0218	63 kD

GADPH - Glyceraldehyde 3-phosphate dehydrogenase; AKT - Protein kinase B (PKB); PI3K - Phosphoinositide 3-kinases; AMPK - AMP-activated protein kinase