

Table S4. Partial of DEGs involved in growth, metabolism and immunity

Treatment	Acronym	Gene name	Log2FC	Regulated	FDR
YL25	<i>Errfi1</i>	<i>ERBB receptor feedback inhibitor 1</i>	1.292360	down	0.0072430
	<i>Gadl1</i>	<i>Acidic amino acid decarboxylase GADL1</i>	1.474174	up	0.0077045
	<i>Dusp5</i>	<i>dual specificity phosphatase5</i>	1.471459	down	2.52E-05
YL50	<i>Errfi1</i>	<i>ERBB receptor feedback inhibitor 1</i>	2.581062	down	5.17E-10
	<i>Fasn</i>	<i>fatty acid synthase</i>	1.278785	up	0.0003678
	<i>Fabp2</i>	<i>fatty acid-binding protein, intestinal</i>	1.508187	up	0.000166486
	<i>Ftcd</i>	<i>formimidoyltransferase-cyclodeaminase</i>	1.117450	up	0.0003119
	<i>Glde</i>	<i>glycine decarboxylase</i>	1.247167	up	0.0077539
	<i>Amy2a</i>	<i>amylase alpha 2A</i>	2.576246	down	6.99E-11
	<i>Dusp1</i>	<i>dual specificity phosphatase1</i>	1.222461	down	0.0025691
	<i>Dusp5</i>	<i>dual specificity phosphatase5</i>	1.393692	down	0.0002042
YL75	<i>Socs1</i>	<i>suppressor of cytokine signaling 1</i>	1.049256	up	0.0054801
	<i>MAO</i>	<i>flavin containing amine oxidoreductase</i>	1.620982	up	0.0003471
	<i>Tap2a</i>	<i>transporter associated with antigen processing 2, subunit type a</i>	1.128581	up	1.399E-07
	<i>MHC-I-I</i>	<i>major histocompatibility complex class I-related gene protein-like</i>	1.262056	up	0.0026493
	<i>Tnfrsf10b</i>	<i>tumor necrosis factor receptor superfamily member 10B</i>	1.204773	down	0.0097271

**Abbreviations:** 25%, 50%, 75% of the fish meal in the diet was replaced with YL, named as YL25, YL50, and YL75, respectively.