

# **Feeding and Food Availability Modulate Brain-Derived Neurotrophic Factor, an Orexigen with Metabolic Roles in Zebrafish**

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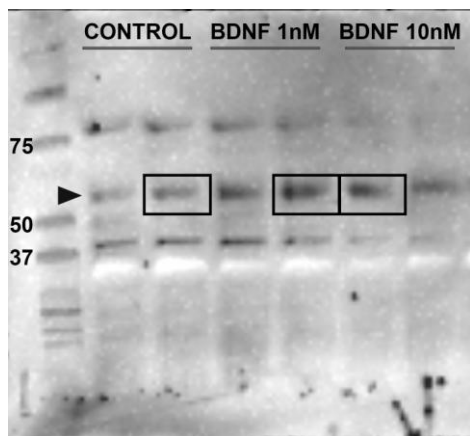
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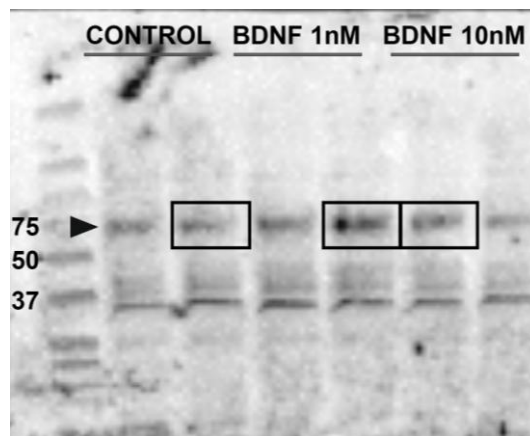
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**Supplementary Figure 1.** Full-length images of immunoblots included in Figures 5a and b. Bands shown in Figures 5a and b are boxed. For each protein, two separate blots containing two samples per treatment were performed. Figure here shows one of those two blots. **(a)** Glut2. **(b)** Sgl1. Molecular markers are included. See corresponding figure legend for details.

**a**



**b**



**Supplementary Table S1.** Primers used for quantifying gene expression by RT-qPCR in this study.

<b>Gene</b>	<b>GenBank accession number</b>	<b>Primer sequence (5' to 3')</b>	<b>Product size (bp)</b>
<i>β-actin</i>	AF057040.1	F: TTCAAACGAACGACCAACCT R: TTCCGCATCCTGAGTCAATG	93
<i>acaca</i>	NM_001271308.1	F: AATCAGGTGGTACGGATGGC R: GGATGTTCCCTCTGTTGGGG	160
<i>acadm</i>	NM_213010.2	F: AAGGTTTTGAGGGCAGGTGT R: ACTCTTTCTGCTGCTCGGTT	139
<i>acat1</i>	NM_001003746.1	F: ATCCCGCAGAGAGGAAAACC R: CGAGTGGTGTGACGTTGAGT	211
<i>acly</i>	BC076484.1	F: CCCACACCGCTAACTTCCTT R: TCCTGGCGCGAACAACATA	247
<i>agrp</i>	NM_001328012.1	F: CTGGGACGTGAGCACTACAG R: AAGGTGCTCCATTTTCAGGCA	169
<i>bdnf</i>	U42489.1	F: CGAGGAATAGACAAGCGGCA R: ATCCGTATAAACC GCCAGCC	110
<i>cart</i>	GU057836.1	F: GAGAGACTTGGCTGAGGCAC R: GAAAGTGTTGCAGGCGGTTT	181
<i>cck</i>	XM_001346104.6	F: ACGCTGGACTCTGTGTAT R: CTTCATCGTCCTCTGGTTTG	186
<i>cpt1a</i>	NM_001044854.1	F: TCTACCTGAGAGGTCGTGGG R: TAGCCGTTCCATTGAGCAG	215
<i>echs1</i>	NM_001004529.2	F: CCCTTGCGATGGAGATGGTT R: CGACTGCCCTCAGCTAAAGT	214
<i>fasn</i>	XM_009306807.3	F: GGCGAGTGGTCAGTCAGTTA R: TTGTTCTGACTCAGGAAGGCG	134
<i>fbp1a</i>	NM_199942.2	F: TGGCGAGTTCATTCTGGTGG R: TCTGCCACCATTGAGCCTAC	183

<i>fbp1b</i>	NM_213132.1	F: GAGTCCCAAGGGCAAGCTAA R: TACAGGAACCCTCTGGTGGGA	142
<i>g6pcb</i>	XM_002661194.6	F: CATCTGGACACCACACCCTT R: TGGGTGGTCTGAACGAGTCT	196
<i>gck</i>	NM_001045385.2	F: GACACAGGGGACAGAAAGCA R: CCACCCCCACAGTGATCTTT	205
<i>glut2</i>	DQ098687.1	F: GGATACAGCTTGGGCGTCAT R: CTCTGTGCCATTTCCCCCTT	117
<i>glycogen phosphorylase</i>	AY576991.1	F: TGTAAGTCCTCGCGCACA R: ACATCCCCGAGTCCTGCTAT	156
<i>grl</i>	AM055940.1	F: ATGGTCCCGTGCTTCAGAAT R: TGCACCCACTTTGCTACAGA	206
<i>hmgcl</i>	NM_201215.1	F: AGCCACGTCAATAGAAAGCAGT R: CCTGGTCCTTTTGCCTCTGT	157
<i>hadh</i>	NM_001003515.1	F: TGGAGGCTGTTCGGTTACAC R: TTTGTTGAGCAGGGGACTGG	203
<i>leptin a</i>	NM_001128576.1	F: GCTCTCCGCTCAACCTGTATT R: TTTGCCCGTCAATGTGTTCC	136
<i>leptin b</i>	NM_001030186.3	F: TTCCCCGTCACCTCCAATA R: CCTTGCATGTGCCATTGTGTT	190
<i>npy</i>	NM_131074.2	F: GGCCACCAGATCTCATAAA R: GCGCACATTGACGTATTT	146
<i>nucb2 a</i>	NM_201493.1	F: AGGAGCGGCATGAAGAATTT R: GATGGTTGACTTTGGGGTGA	156
<i>nucb2 b</i>	NM_201479.1	F: TCTGTGGGCTTGTGTTGGATG R: TTCTCTCTGAAATGCGGGTC	168
<i>orexin</i>	NM_001077392.2	F: AGAAACGACTCTTCCGTCGC R: CGGCTTGATTCCGTGAGTTG	148
<i>p75ntr a</i>	XM_003198085.5	F: GAGTTGGCAAGCTCTTGTGC R: AAGTGAAGCTCAGCCATCGG	233

<i>p75ntr b</i>	NM_001198660.1	F: TACAACCAGGGGAGAGTGCT R: CATCATTGGCATCCGTGCAG	203
<i>pck1</i>	NM_214751.1	F: AGCTCTTCAGGGTCTCGCA R: TAACGTGTGTGTTGCGTGTCTT	185
<i>pck2</i>	NM_213192.1	F: TCCTTCGGCAGTGGTTATGG R: GCTGCTGCAATGTACCGTTT	161
<i>pfkla</i>	XM_693543.8	F: AGGTATGAACGCAGCCATCC R: TGCCAATCACTGTTCCCTCCC	173
<i>pfklb</i>	NM_001328389.1	F: TTTGAGCACAGGATGCCGAA R: TCGATGCTAAGGGTTCGACG	140
<i>pklr</i>	BC152219.1	F: CCAGTTTAAACACGCGCGGC R: GGAAGTGTCTTTGGCTGT	113
<i>pomc</i>	NM_181438.3	F: CACTGCTCACACTCTTCA R: GCCCACCTTCGTTTCTAT	167
<i>ppara a</i>	NM_001161333.1	F: TAATCCACTCTCTGCGGCTC R: CATGTTACTGCCGGTCTCCT	247
<i>ppargc1a</i>	ENSDART00000097710.6	F: AAAGCCGGTGAAGCCAAGAG R: GGTCACTGCAACACAGAGGA	238
<i>splt1</i>	NM_200681.1	F: TGTCCGTCATGTTGGCTTCA R: TCTGAGCCGTCTGAACGATG	198
<i>trkb2</i>	NM_001197161.2	F: TCACCTATGGCAAGCAACCC R: CTTTGGGGCAAGTACGAGGT	102

F, Forward primer; R, Reverse primer

*acadm*, medium-chain acyl-CoA dehydrogenase; *acat1*, acetyl-CoA acetyltransferase 1; *acc*, acetyl-CoA carboxylase; *acly*, ATP citrate lyase; *agrp*, agouti-related protein; *bdnf*, brain-derived neurotrophic factor; *cart*, cocaine- and amphetamine-regulated transcript; *cck*, cholecystokinin; *cpt1a*, carnitine palmitoyltransferase 1a; *ech*, enoyl-CoA hydratase; *fas*, fatty acid synthase; *fbpase 1a*, fructose biphosphatase 1a; *g6pase b*, glucose 6-phosphatase b; *gk*, glucokinase; *glut2*, glucose transporter 2; *grl*, ghrelin; *hmgcl*, 3-hydroxy-3-methylglutaryl-CoA lyase; *hoad*, 3-hydroxyacyl CoA dehydrogenase; *npy*, neuropeptide Y; *nucb2*, nucleobindin 2; *p75ntr*, neurotrophin receptor p75; *pepck2*, phosphoenolpyruvate carboxykinase 2; *pk*, pyruvate kinase; *pomc*, proopiomelanocortin; *ppara*, peroxisome proliferator-activated receptor alpha;

*ppargc1α*, peroxisome proliferator-activated receptor gamma coactivator 1-alpha;  
*splt1*, sodium-glucose cotransporter 1; *trkb2*, tropomyosin receptor kinase B2.