

**Supplementary Materials**

**Increased acetylcholine levels and other brain effects in  
5XFAD mice after treatment with 8,14-dihydroxy  
metabolite of efavirenz**

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**Supplementary Table S1. Antibodies Used for Western Blots**

Antigen	Primary antibody		Secondary antibody	
	Clonality, host, dilution	Catalog #, vendor	Clonality, host, dilution	Catalog #, vendor
PSD-95	Monoclonal mouse IgG, 1:4,000	ab2723, Abcam, Cambridge, MA	Goat anti-mouse IgG Birdie 680RD, 1:10,000	925-68070, Li-Cor, Lincoln, NE
Gephyrin	Monoclonal mouse IgG, 1:2,000	147111, Synaptic Systems, Goettingen, Germany		
Synapto-physin	Monoclonal mouse IgG, 1:4,000	101011, Synaptic Systems, Goettingen, Germany		
CYP46A1	Monoclonal mouse IgG (clone 9C5-B2-A1), 1:500	Hybridoma facility at Visual Sciences Research Center, Case Western Reserve University		
ATP5A	Monoclonal mouse IgG, 1:1,000	ab14748, Abcam, Cambridge, MA		
GFAP	Polyclonal chicken IgG, 1:5,000	PA1-10004, Thermo Fisher, Waltham, MA	Donkey anti-chicken IgG IRDye 680RD, 1:10,000	926-68075, Li-Cor, Lincoln, NE
Iba1	Monoclonal rabbit IgG, 1:2,000	ab178846, Abcam, Cambridge, MA	Goat anti-rabbit IgG IRDye 800 CW, 1:10,000	925-32211, Li-Cor, Lincoln, NE
Calnexin	Polyclonal rabbit IgG, 1:1,000	ab22595, Abcam, Cambridge, MA		
$\beta$ -Actin	Polyclonal mouse IgG, 1:2,000	ab8226, Abcam, Cambridge, MA	Goat anti-mouse IgG IRDye 680RD, 1:10,000	925-68070, Li-Cor, Lincoln, NE
$\beta$ -Actin	Polyclonal rabbit IgG, 1:1,000	ab8227, Abcam, Cambridge, MA	Goat anti-rabbit IgG IRDye 800 CW, 1:10,000	925-32211, Li-Cor, Lincoln, NE

**Supplementary Table S2.** List of Primers for Quantitative Real-Time PCR.

Gene	Forward primer	Reverse primer
<i>Ache</i>	5'-GAGATGCCATGAGTGCAGTG-3'	5'-GGCACGGTGTTCAAAGATGT-3'
<i>Chat</i>	5'-AACCTGGCTACCTTCCAGTC-3'	5'-CTAGCAACCAGGCAGTCAAC-3'
<i>Chrm1</i>	5'-GCCTCCTGTCTTCAGTGTCT-3'	5'-ATTACCTGTGGCAGCCTCTT-3'
<i>Chrm2</i>	5'-CCTGTAGTGTGCGACCTTTG-3'	5'-CAGCTGCAATCATCATGCCT-3'
<i>Chrna4</i>	5'-TTGGCTTGTCGATTGCTCAG-3'	5'-CGCAGTTTGTAGTCATGCCA-3'
<i>Chrna7</i>	5'-CCCTGGCTTTGCTGGTATTC-3'	5'-GCACGGAATCAGATGTTGCT-3'
<i>Gapdh</i>	5'-AGTCCATGCCATCACTGCCACC -3'	5'-CCAGTGAGCTTCCCGTTCAGC -3'
<i>Gna11</i>	5'-CATAGTCACTGCACCTTGCC-3'	5'-CCTGCCTATGTCCTCTCTGG-3'
<i>Prima1</i>	5'-AGGCAAGTTAGCTCACCAGT-3'	5'-AGCGTGTGTACCTGAACTA-3'
<i>Slc5a7</i>	5'-TCACTGGCTAATGCACTGGA-3'	5'-GCAAGAGCAAGACAGCCTAC-3'
<i>Slc18a3</i>	5'-AGCCCTACCCTGATCTCTGA-3'	5'-CAAGTAGGCGCTGGCATTAG-3'