Deficiency of kdm1a induces locomotor abnormalities and learning and memory deficits in zebrafish larvae

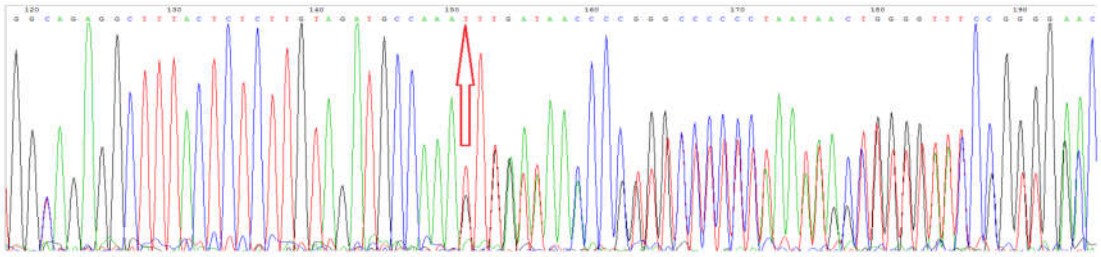
Supplementary Materials

Supplementary Table 1. Sequences of primer pairs used in the PCR reactions.

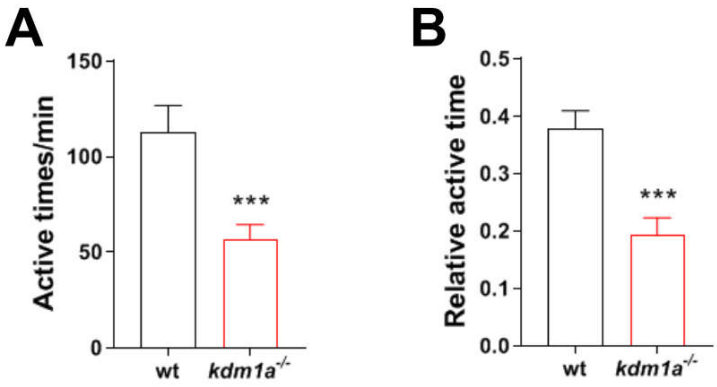
Target gene	Primer sequences	Accession number
kdm1a	F: 5'-AATACTCGCTCCACTACC-3' R: 5'-TGTTTCATCACTCCCAAA-3'	NM_001242995.1
neurog1	F: 5'-CCATCTATAAGAAGTCCGAGCAT-3' R: 5'-TGTCCATTCAGCACCAAGC-3'	NM_001271820.1
neurod1	F: 5'- AAGTTGTTCCGTGCTACTCC-3' R: 5'- TGCCCGACCTCAAGATTTC-3'	NM_130978.2
elavl3	F: 5'-AGCCACTAGGAGCAGCTGAG-3' R: 5'-GGGGACAGGTTGTAGACGAA-3'	NM_131449.1
tuba1	F: 5'- GAGGTTGGAGCTGAGAGTGTG-3' R: 5'- ACAATGGACAGGAAACACAGCA-3'	NM_194388.2
gfap	F: 5'-CCTGACCTGTGACCTGGAAT-3' R: 5'-TCCAGCAGCTTCCTGTAGGT-3'	XM_005163983.4
gap43	F: 5'-AAGCAGGGCAAGTCAAGAGA-3' R: 5'-ACGTCGGTTTGCAAGTATCC-3'	NM_131041.1
syn2a	F: 5'-GTGACAAACCCTGGGCATTT-3' R: 5'-TCTCCACTTTCACCTTCCCC-3'	NM_001002597.2
lc3	F: 5'-AGTGTTTGCTATGGGAGT -3'	NM_198876.1

	R: 5’- AGTGAGGTTGTGGAATGT-3’	
p62	F: 5’- GGAAAGCGGACCAAAGTA-3’ R: 5’- AGAAAGAAGCCCCACAGA -3’	NM_001312913.1
beclin1	F: 5’- TGGTCTGCGTTTTTTCTG-3’ R: 5’- ATCCTTCTCCACCTCCTC-3’	NM_200872.1
bcl-2	F: 5’-TCAATAAAGCAGTGGAGGAATC-3’ R: 5’-CAAATGAGGGTCTGAACGAG-3’	NM_001030253.2
bax	F: 5’-TGTGACCCCAGCCATAAAC-3’ R: 5’-CGACAGGCAAAGTAGAAAAGC-3’	NM_131562.2
caspase-3	F: 5’-GCCACTGCATCATCATCAAC-3’ R: 5’-TAATCTGCGCAACTGTCTGG-3’	NM_131877.3
caspase-8	F: 5’- CTACAGACGCAGAAACTCCAT-3’ R: 5’- TGTCCATATCAGTGCCTGTTC-3’	NM_131510.2
caspase-9	F: 5’- TCTAAACGCATAAGGCACG -3’ R: 5’- TGTGATTATCTGAATTGGGACA-3’	NM_001007404.2
gapdh	F: 5’- TGTAAGCAATGCCTCCTG-3’ R: 5’-CCATCAACGGTCTTCTGTG-3’	NM_001115114.1

Organism: Danio rerio



Supplementary Fig. 1. Representative sequencing map of *kdm1a*$^{+/-}$ mutants (-1 bp). Neurobehavioral alteration in *kdm1a* deficiency zebrafish larvae. The red arrow indicates an increase in heterozygosity of -1 bp at 151 bp.



Supplementary Fig. 2. Neurobehavioral alteration in *kdm1a* deficiency zebrafish larvae. (A) Active times and (B) relative active time in spontaneous locomotor activity test at 5 dpf (10 min). Data were presented as mean ± SD of three independent experiments (n = 12 in each group). $^{***}P < 0.001$, compared to wt group.