

PINK1-KO/AIW002-02

Control line Disease line
Gene edited? Yes

General information

Cell line name	PINK1-KO/AIW002-02 No.A01
Biosample ID	2889
Lines from same donor	

Donor information

Sex	MALE
Age	37 YEARS
Race	CAUCASIAN

Culture conditions

Coating/medium	MATRIGEL/mTeSR1
Passage method	Gentle cell dissociation reagent

Derivation

Primary cell line	PBMC
Reprogramming method	RETROVIRUS
Reprogramming factors	Bcl-XI <input type="checkbox"/> Myc <input checked="" type="checkbox"/> Nanog <input type="checkbox"/> SOX2 <input checked="" type="checkbox"/> LIN28 <input type="checkbox"/> KLF4 <input checked="" type="checkbox"/> OCT3/4 <input checked="" type="checkbox"/>

Disease status

Disease	Parkinson Disease
Affected gene	PINK1
Disease mutation/family history	PINK1-KO

Genetic modification

Modification	CRISPR-Cas9 Knock out
Gene	PINK1
Gene ID	ENSG00000158828
Chromosome location	Chromosome 1: 20,633,455-20,651,511
gRNA	ACTGGCGGAAGAAGCGGAGA
Replace DNA Sequence	CTGGGCCGCAGGACCGGGCGCGGAGCCTCGCAGGGTCGGGCTCGGGCTCCCT AACCGTCTGCCGGCGTAACTAGCTGACGGTGGCCGGGCTGGCGGCGCGGTTGC AGCGGCAGTTCGTGGTGC GGGCCTGGG
Delivery method	Lonza Nucleofection
Subclone IDs	A01
Description	For knocking out the expression of Pink in AIW002-02 iPSCs, Guide RNAs (gRNAs) were designed using the "optimized CRISPR design" tool (www.crisp.mit.edu). The locations of gRNA1 were around exon 1 with ATG start codon. Through homologous recombination, the stop codon is introduced into Pink codon sequence, The replacement DNA sequence is CTGGGCCGCAGGACCGGGCGCGGAGCCTCGCAGGGTCGGGCTCGGGCTCCCT AACCGTCTG CCGGCGTAACTAG CTGACGGTGGCCGGGCTGGCGGCGCGGTTGC AGCGGCAGTTCGTGGTGC GGGCCTGGG Recombination cell line is identified by ddPCR and finally verified by DNA sequence. Red sequence is insertion sequence which contains stop codon.

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3CTCCCTAACCGTCT          CCGCTTCTTCCGCCA6TCGGTGGCCGGGCTGGC66C6C66
jctccctaaccgctctgcccggcgtaactagctga-----cggtggccgggctggcggcgcggg
    
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Figure 1. Sequence verification of PINK knock-out in AIW002-02.

Characterization:

Genotyping analysis:

Passage number	
Karyotyping	
qPCR (Genetic Analysis kit)	Normal

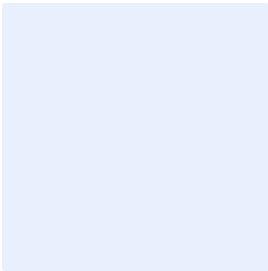


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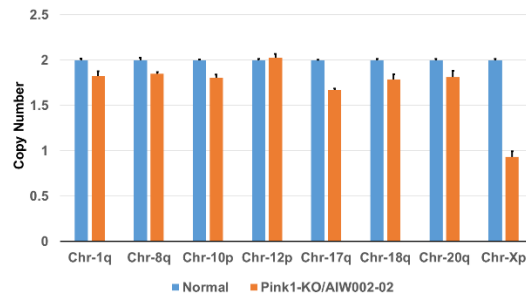


Figure 3. Genetic stability assay show normal chromosome of Pink1-KO/AIW002-02 No. A01

Pluripotency analysis:

Marker	Expressed?
Nanog	
Tra-1-60	
SSEA-4	
OCT3/4	

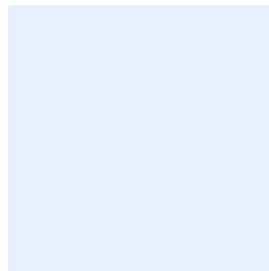


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Microbiology/virus screening:

Mycoplasma test	Negative
Hepatitis B	Negative
Hepatitis C	Negative
HIV1 or 2	Negative