

630 **Supplementary files**

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632 **Supplementary Figure 1. qPCR primers for iPSCs.**

<b>iPSCs-QPCR primer</b>	<b>primer (5' to 3')</b>
<i>Foxg1-F</i>	CCTGCCCTGTGAGTCTTTAAG
<i>Foxg1-R</i>	GTTCACTTACAGTCTGGTCCC
<i>Neun-F</i>	GTAGAGGGACGGAAAATTGAGG
<i>Neun-R</i>	CATAGAATTCAGGCCCGTAGAC
<i>Brn2-F</i>	AAAGTAACTGTCAAATGCGCG
<i>Brn2-R</i>	GCTGTAGTGGTTAGACGCTG
<i>Gfap-F</i>	CCTCCAGCGATTCAACCTTT
<i>Gfap-R</i>	GAAGCTCCAAGATGAAACCAAC
<i>Co2-F</i>	CCCCACATTAGGCTTAAAAACAGAT
<i>Co2-R</i>	TATACCCCCGGTCGTGTAGCGGT
<i>Dloop-F</i>	TATCTTTTGGCGGTATGCACTTTTAAACAGT

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<b><i>Dloop-R</i></b>	TGATGAGATTAGTAGTATGGGAGTGG
<b><i>Shh-F</i></b>	CGGAGCGAGGAAGGGAAAG
<b><i>Shh-R</i></b>	TTGGGGATAAACTGCTTGTAGGC
<b><i>Gli1-F</i></b>	TCTGCCCCCAATTGCCCACTTG
<b><i>Gli1-R</i></b>	TACATAGCCCCCAGCCCATACCTC
<b><i>Patch1-F</i></b>	CGGCGTTCTCAATGGGCTGGTTTT
<b><i>Patch1-R</i></b>	GTGGGGCTGCTGTTTCGGGTTTCG
<b><i>Actin-F</i></b>	TCACCCACACTGTGCCCATCTACGA
<b><i>Actin-R</i></b>	CAGCGGAACCGCTCATTGCCAATGG

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635 **Supplementary Figure 2. qPCR primers for wild-type and IOB mouse.**

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<b>WT and IOB mouse -qPCR primer</b>	<b>primer (5' to 3')</b>
<i>neun-F</i>	GTTGCCTACCGGGGTGCACAC
<i>neun-R</i>	TGCTCCAGTGCCGCTCCATAAG
<i>pax6-F</i>	GTTCCCTGTCCTGTGGACTC
<i>pax6-R</i>	ACCGCCCTTGGTTAAAGTCT
<i>brn2-F</i>	AGAGCCCAAGGCAGAAAAGT
<i>brn2-R</i>	GGCGCTCTGGTTAAAGGAG
<i>gfap-F</i>	GGACTGAACCATGTCCTTTGTC
<i>gfap-R</i>	AGGCTAGCTCTATCGGTATAACCTAA
<i>Mito1-F</i>	CTAGAAACCCCGAAACCAA
<i>Mito1-R</i>	CCAGCTATCACCAAGCTCGT
<i>Cox1-F</i>	TGCTAGCCGCAGGCATTACT
<i>Cox1-R</i>	CGGGATCAAAGAAAGTTGTGT
<i>gli1-F</i>	TTATGGAGCAGCCAGAGAGA
<i>gli1-R</i>	GAGCCCGCTTCTTTGTTAAT
<i>gli2-F</i>	TGAAGGATTCCTGCTCGTG
<i>gli2-R</i>	GAAGTTTTCCAGGACAGAACCA
<i>gli3-F</i>	AAGCGGTCCAAGATCAAGC
<i>gli3-R</i>	TGTTCCCTTCCGGCTGTTC
<i>patch1-F</i>	TGACAAAGCCGACTACATGC
<i>patch1-R</i>	AGCGTACTCGATGGGCTCT
<i>gapdh-F</i>	CATCACTGCCACCCAGAAGACTG
<i>gapdh- R</i>	ATGCCAGTGAGCTTCCCGTTTCAG

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638 **Supplementary Figure 3. Genotyping processing for wild-type and IOB**  
 639 **mouse.**

640 (a) Genotyping primers for wild-type and IOB mouse. (b) Genotyping  
 641 processing for wild-type and IOB mouse.

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644 **(a) Genotyping primers**

OCRL Wild-type (250 bp)	primer (5' to 3')
GT-F	CCCTTTTCATCTGTTAGGAGAAAT
GT-R	GCATGGTTAAACGCACACTATGTGG
OCRL KO (480 bp)	primer (5' to 3')
OCRL KO -F	GCCCTTTGATTCTAATCCCTTTTCATC
OCRL KO -R	TCTGAGCCCAGAAAGCGAAG

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Inpp5b (wt 150 bp/ mut 220 bp)	primer (5' to 3')
E25-F	TAAAGTCTGAAAATCCAAGGC
E34-R	CTCATTCTCCTTGATTCCAA

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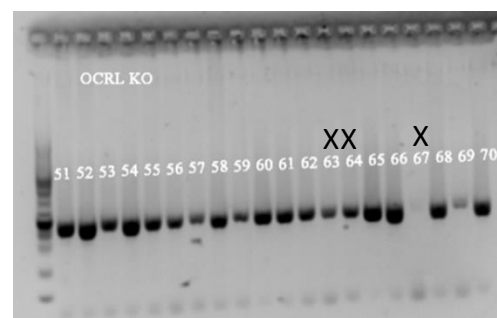
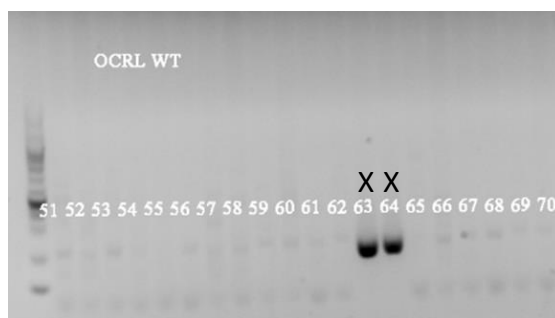
INPP5B HumanBAC (240 bp)	primer (5' to 3')
in Exon 1F	CCACCCCACGATTGACTC
in Exon 1R	GGTGTCCCAGCCCTCAG

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648 **(b) Genotyping processing**

649 Step 1 - OCRL WT

Step 2- OCRL KO

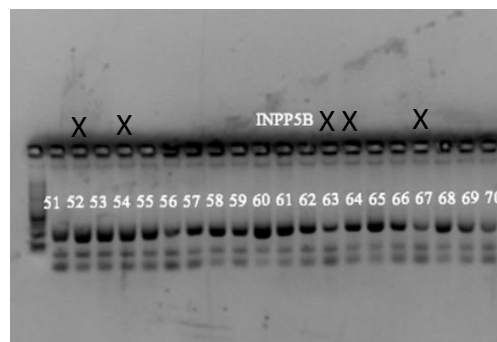
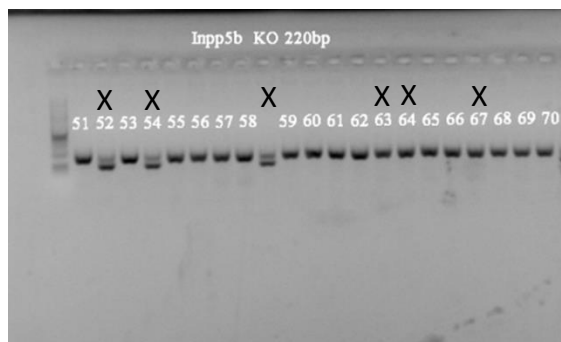


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651 Step 3- Inpp5b (wt 150 bp/ mut 220 bp)

Step 4- INPP5B HumanBAC (240

652 bp)



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