



Lexicon Genetics Incorporated – Genentech Project Materials

Genentech ID:	UNQ326	Date of Submission:	
Lexicon Contract Name:	DNA464	Mutation Type:	☒ Standard Knock out
LexVision Name:	CHA325N1		☐ Conditional
Reference accessions:	BG075631, BY724140, BG088175, XM_134787.2	Is this gene X-linked?	No

Required Materials: ☒ pKOS clone DNA(s) __pKOS/40_____
☒ Target Vector DNA __pKOS/40 FTV4_____
☒ Targeted ES Cell DNA __1B8_____
☒ Genomic Map

Southern Blot Analysis: External/Internal Probe Strategies

	<u>5' External</u>	<u>3' External</u>
Name of Probe:	DNA464 (9 + 10)	DNA464 (11 + 12)
Restriction Enzyme for Genomic Digest:	HindIII	XbaI
Predicted Wild-type Band (kb):	11.2 kb	10.3 kb
Predicted Mutant Band (kb):	7.4 kb	15.0 kb
Probe Size:	386 bp	442 bp

PCR Strategies:

For standard knockouts, give wildtype and mutant-specific strategies

For conditionals, give 5' loxP and cre-excision strategies

Wild type-specific (absent in targeted allele)		Mutation-specific product (absent in wt)	
5' Primer Name:	DNA464-13	5' Primer Name:	Neo3a
3' Primer Name:	DNA464-8	3' Primer Name:	DNA464-8
Predicted Wild-type Band (bp):	483 bp	Predicted Wild-type Band (bp):	none
Predicted mutant band (bp)	none	Predicted mutant band (bp)	375 bp

5' loxP strategy		Distinguish Cre-excised and wt	
5' Primer Name:		5' Primer Name:	
3' Primer Name:		3' Primer Name:	
Predicted Wild-type Band (bp):		Predicted Wild-type Band (bp):	
Predicted mutant band (bp)		Predicted mutant band (bp)	

Primer sequences:**Southern probes**

DNA464-9 5' – TGGAGGCTGTCTATGGCAGC
 DNA464-10 5' – GGTCTTGAGAAACACCCCTGG
 DNA464-11 5' – GGAACGCAGCAAGCACGTGG
 DNA464-12 5' – CATAGAGTGGGCAGACAAGC

PCR Genotyping

DNA464-8 5' – CTATTCAAGAGAAGCACACC
 DNA464-13 5' – ATACTCCATTCTGTGGGTAGAGG
 Neo3a 5' – GCAGCGCATCGCCTTCTATC

Genomic Sequence Deleted:

CGCGAGCATGGAAGTCACAGCGCCCCACCACTCTTAGTGTCCTCAATGGGTCCGATACCCGCCTGCCCTGTACCTTCAACTCCTGCTACACCGTGAACCA
CAAGCAGTTCTCTCTTAACTGGACTTACCAGGAGTGTAACAATTGCACAGAGGAATAAGTTAAGTCTGTGGTGAGGAGGGAGTGGAGGGAAGCAAAAC
CCCCAAGGCATGAAGCCACCACCTCCCCACCTCCACCCCTACCCCACTCCCTAGTCTGCTGACTGGGAACAGGGCCCCAAGAGGACTCTGT
TAGGGCTGTTTGATACAGAGGTTTATGATGTGCCCAACTGGATGGGCCTTCCAGGTCTAATGCCCTTCTTCCCATGTTAAGAAGAAGAGATGCACAGG
AAGAGGGTGTGTCCCCACAAGCCCCATAGCCCCCTTGCGCATGCTCACACAGCGCTCATACTATTTGCCCTTCCCCTCCCAGTTCCTCCAGTTCGGAATG
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GCTAGAAGACCAAGGCATTTGACACTGCTACATTACCAACCTCCAGCCAGCCGCGGCCACGGCAAGATTTACCTGCAGGTCTCTTAGAAGGTA
AGAGTGACTGAGTTGCTGTGGGACACTACCGGTTCTCTACAGCTTAGCTCAGGGCACTTCAAGGAGCCTGTGACTCCCATCTCATCTTCAGGTGCTTGT
CCTGGTGGAAGACATCCACACCTTCCCTCTAAAGGGAACAAGTCAGTCACGATTAATAACCTTCATTATGCCCATTGTATGGATGAGGAACTGAGGTTT
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GAGGGCTCTTTGAAGGGGGCAGTGGTCTAGTTTGCTTTGACTTTCATAATGCCCTGTCCATGAGGAGGAATCAAATAATATCCCCTCCTATTTTGGG
GAGCAGGGGGCAGATAGGGAATTTCTTCCAGCTCTATGATTCTGCTTCTTCCCTTAGTACCCCAAGAGCGGGACTCCACGGTGGCGGTATCGTG
GGTGCTCAGTGGGGGGTTTCTGGCTGTGGTCATCTTGGTGCTGATGGTGGTCAAATG

Genomic Locus: (The deleted sequence represents nt 10189 – 11432 in the sequence below. KOS40 used to generate the TV represents nt 6094 - 16261 in the sequence below.)

[illegible]

CCGAGGCGCTTTGGCAAGAGGACACGACGGGGCTGGCCTTGAGGGAGATGGTGCCTTGGATGCAGACGCGCTGCGCATGAGGGCTGCAAGGAGGCAATGGAAGAAGTGCATGTTTCAGCAGGCTGTGTGAGAGTGGAGACCTGGAGGCTTCGGGAAGCTGTAAGGAGGCCACGCTCTGGCAGTGCCATTCCCTCGGCAACGGAACTTGGATGCTTGCAGTAGCAGTGGTCACTGGGATGACCGGATACCCGATAGGAGGGAGAGCGTATCAGAGAGCGAGTTACATGCGGATGACGTAAAGATGGCCACAGCATATTTCCACGACAAAGCTCAGGGTGTTTCTCAAGACCACGCGTTTTTACGCCACTGTCTGGTCATCAAGGTCCTGGGCTGTGTTTGAGGGGAGCTTAGAGAGTAGAGTGTGGGCTCCGTTCAACCCTACACATTTGCTGCTAAGGGCAGGACTTAGATTGAGGAGAATGCCTCCTCCTGCGCTACCCATAACCCCTGGCAACAAAATTGTATTGAGCACTCAGTATGTGCTATGTGCCGTCTTGGACTCAGGGATAGCAACACGAATAAGAAGGAGCTCACCAGAGCCTCTGGAGAGACGCGAGGTACATAAGCAACACGCGCTCAGCATTTGTGTGTGCTATGAGAATTGTTGGGCATGCTAATGCTGGAGGTCACTTTTGCTAACAGCTGTGTGCCAGGCTGAGCTTGCACATAGACAGCACTCACTTAATTGCCCATGACCTTAGAGGGTGTAGTGTCTCCCTGTATTACA
GATGAGGACATTGACAGCATGGAACCCCTAGTGCACTTGCCCAAGATCATATCAAGATCTCTAGAGTCCCAGGCTTGAACACCCTACCACCTTGCCCGCTGAGTCACTGGAAGTAATAGGAGCCTGGCTGGGAGAGGATCAGACACTAGGGAAGATGTCACCTAAGCTGTGCCCTATGAGTGGGGTTTGGGGTTTATGTGGAAGAACTCCAGGGAGGACGGCGAGCAAAAATTTCCAACCTAAAGCAAAAAGCTGAACAAGGCCAGGTGGAGGGGAGGGAAGAGGAGACTGGGAGATTCCGCTGTCCCTAGAGTCCCAGCAAGGGGTGGGGCTGGCAGGAGATGAGGCTGTGATGTGCAGCTGTGCCAGATGGGAAGGGCACCCAGGA
GCTGCACCCAGGTGCCAGAACTTGCCCTAGAAGCAGCAAGGAGCCACTGGTGTCTCGGAGGTAGGGATGGGAGTACAGCTTGGTTCTGCTGCTGCTGGGAGGATCTGGGCAAGAGAAACTGAGTGGAGAGGCGGGAGAGCTAGACATCAGATGTCCCTTGGAGGCAGGAGCTATTAGAAGACAATTCTCCCAACCTCCTCTTACCCTCCTCCCTTTTAAAAAATCTTCTTTTTTCCCTAAGAATAAGACAAGTGTATAGATTGCTTTAGGCTGGAAGGAGGAGAAAAGGGAATTTACTTCCAAGTCTTTTGAAGAGAGTGTTTGGCAGATAAGCCATGTTTCAGGCTCTGTCATGCTCCCTGGGAGAACCATGGATGGTGAGGCCATAAGGACCCCAACTGTGTGCAATCTGGGTGCTGACCCCATCATCTAGCTTGTAGTTGGAATTGGAATCAGGAAACCTAGACCTAGACATGAGCTGGTATCCAGATAGGACTTTTGGTGGAAACCCAAAGCGGACCAATTGTCTGCTGGGGATTCTGCAGGAGTCAGGGACTGGAGCCACTATGTACATCTTAGGACACCTTGAACGGACAGTAACACGCCCCCAACCCAAACCCATCCCCAGCTCTGTGTCTCACCTCAGCCCTGTTTGGAGCCAGGCGGCATGGATTGAGTTCTAGTTCTCTCTCACTTTCTCCCTGCTGTCTGGGACTGGTTCGTTGACATCTGTGGCCACTAGAGGGCACACGAAATCCCATCTGGCTCCTCTTGCAGAGCACATCGAGGGGAACCCCGATTGCACCTTTCTGTCTCCCTGCCATTAGCCCTGCAACTTGCACCTGACGTAGCTGAGTCTCTAGATGAGATGGGGAGGAGATGTGAGCTGATGTTTCAAACCTGGGAAGGAACAAGGAGAAGAAAGGTGGCACTTACCGAGCCAACTAGTTTACACAGACACTTGTGTGGGGAGGGGTGGCCCTGGGAAGGTGGAAGCCCTTTCAGGGGGAGGGGCTGGATAGGTGCGAATGCCCGGTATAGAAGGTAACTGAGGACAAGCCTCCATCAGTTCCTTCCCTCAAATTCCTCAGCCTCTGCAGTGTGGGGGTGGTGTTAATATTTTCTGCACACCTCCCTCTCGTCTGGCACCCGGCCAGGTACTTTAGACTCGATGAAGAGTGCAAGAGTGAAGAGTGAAGGCTGTGCTCTTGGGAGGAGCCCCATCAGTTCCTCCAGCTGGCGTTCCTCTGTGACAGCTCTGTGCTCAACTGAGGTCAATTGTGTGAGCAGGTGGTGTCTGTACCCGCCCCAGGCAGGGCCTTGGTGGGGATTCCAAAGGCCAGCAGTCCAGAGACCCCTCTGATTTTAGGTTTCGAGCTCTGCAGGCCCTTCACAAGGGTGGGTGTGCAGTGCAGAAAGGTGCTCCGGCAGGTTTAGATCTCTGCTTGCAGGCTGTTGTACTTCTGCTTCTGAAGGGAGGGCCAGCTGGTTTGTGGGAAAACCCAGGATCCTTGCAGCCTGGCTCCTTAGCTAGAGATCCCGGTTAAATCCAGTCTCTGAAGTACCCCTCAGTCTAGAGACTGCCCCACCTCACCTCTTAGCTCTTTCTGTCCTCCCAAGCAGACGTAGGAGATGTCAGTTAATAGCAGCTGTACTTTGTCTAGCTCTCAGCTATTCAGCTATTCAGTCTGAGCTGTGCTGCTCAACTGAGGTCAATTGCTAGCTATTCATAGCTATAAGCACCCAGTCAGAGTGCATGAAGTGCATGAAGTGCAGTTGCTGGGAGGAGGGCTGAGGCACAGGGATGGGGGTGGGGGTTCGGGGGTAGGGGTGGAGAAGTCTGCTTACATTTCTCATAGTTGATCGGGGCTACAGCTGGGACGGAAGATAAGTGAATTTGGGGGGACATGTGTCTGCCACATCAGTAGCTATAATCTTCACTCAGCTGGCACCCCATCGACTGCACCCCATCCTTAACCCCCCTTAAATCATCCCAGATCCCATGTTCTGCCCCCTGGCCTGGTCTCTTGGCCAGCTCTAATCTCAGGTCTTCCCATGCCCTGCCTTGTCTTTCTCAGATGTATGAAGGTCAAATCCAGCTTTAGAAATGTGGCCCTGTAGTTCCTATGATGTCCCTCAGTCTCTTCTCAAGTTCAATGTCTGGATGCTATTCCTCCAGGCTTATTTCTCGGCCACCCCTTAAATCCCTCTGCCATATTTTATTTCTTATATCCCATGTCTGAACATTCAGACGCGCCATGTCTCTATTTTCACTTCTGTCTCTTTATGCTCCCTCACCAGAATACAAGCCCCACCACACAGTGGTTATGCCTCATACTAGTGACAAGTCTTAGGATCTAGGACTAAACACAACCTGGCACACAGTAGGTAATTTACGTGTATTTAGTATCGTGAATGAATGAGGGCTAGAGATGTGGTTCTGTGTGGTAGAGTGCCTGCCTCTACCAATTTAAGGACTTACATTTGATCTGAGCAGTGAATAAACTGGGTGGGGGTGGGGCACCCCTTATAATCCCAGCACTCTGGAAGTGAAGTAGGCAAGGTAGAAGTTCAAGGTTCATTTCTAGCTATATAGCTAGTTTCCAAAGATAGCCTGGGCTACCCAGAGGAGGCCAGCAGATACACCCCTCTCGCAACACTCCAAGGCCAAATGTAA
AAACCAAAACCGAACAAACCAGACAAACAAAAAAGCCATGCCCATATCACAAAACAATGAAAATGAAGTGGCACTGTCACTGTCTGGGGGTTTTGATGTGAGCCATTGCTCTAACCCCTGAGCTATGCCCTCGCCCTGTTAATACTAAGCTGAACCTTTAGAATGAAGTTTTAACAGCCTTGGCAGATGATCGATTGTGGAATTAAGGTCTGGGCTAGTCTGAGGCAGTCCCTGCAGGTATCTGTGGAGCTTTGCAGTGCGTGTCTGTGAACGGCTGGGCCCTGGCGTCTCAGTGTCTCCTCATCTGTCTGTCTGCTCTACGGAGATTGTGGGGGCACTTCTCTCAGTTGCAGCACAGCCGCTTGACCTCAGCTACGTATCCCGAGGATTCTGTGTTCTCCACCCCTGCCTCTGCCAAACCTGAACCAACTCTGCGCCATAGCGTTTTCCAGGTGAGCATTTCCCAAAGGGCAGAGCATCCATGTAGGCGGTCAGCAAGTCTCAGAAATGAACCTCTTCTTATGGGACACCTCTTCTTTCCCGCTGCGCCTCTTCTCGAGCCTGGGGATAGTCAGTGGCTCGTGCTGGGCAAGGGAGAGCGAGGCGCTTCCAGGCTCGCCCAAGTTTTAGCTGCCTGCCCATGGGAACAACGACGCTTTCCCTAGATGGGCTTAAATAATAATCTGAAGAAAGAAATAATCTGGAGTGATGGAGATGGGAAATGGGAACAGCCCAAGTCAAGCTTTGGCAGGTTAATGGCTTCGGGTGGGTGAGGGCAATGGAAGAGGGTCTGCCTACAATGAACTTAGAACAAGCAGAGATGCAATTTGACTGTCCATGGCTGGTAGACAATTTAGTGGTCTGTTTCTACAGTGGTTCTGTTCCTCTTCTCCTCCTAAGGACCACATCTGGTGTCCCTCATGCGCTTCACCTTCCTAACAGCTGTAAAGAGCCCAGCCTATTGCCCTTAACTCCTGTCTCTCTCCGTCTGTCCCCATTGGCTACAGAAAGGGTTGCAACCCCTCCACCTGTACCAAGCATCCTCATCAGGTTGTGGTTCTATCTGCAGTGCCTCCCGGGCGGAGCATGGAAGTGCACAGCGCCCACTTACTGTCTCTCAATGGGTCCGATACCCGCTGCCCTGACTTCACTTCACTCCTGCTACACCGTGAA
CCGACAGGAGTTCTCTTAACTGACTTACCAGGAGTGAACATGTCAGATGGAGAAATGGGAATGAGCTTTGGCAGGTTAATGGCTTCGGGTGGGTGAGGGCAACCCCAAGGCATGAAGCCCACCATCCCCATCCCCACCCCTCACCCCAACCCCATCCCTAGTCTCTGCACTGGAAACAGGGCCCCAAGAGGACTCTGTGTAGGCTGTTTGATACAGAGGTTATGATGTGCCACAACCTGGATGGGCCTTCCAGGTCTAATGCCCTTCCCTCCCATGTTAAGAAAGAAGATGCACAGGAAGAGGGTGTGTCCCCACAAGCCCCATAGCCCTTGGCGCTTGGCGATGCTCACACAGCGCTCATACTATTGGCCCTGCCCTCCAGTTCTCCAGTTCCGGAATGAAGATGATTAAGACTTAAGCTGAAGCTGGAGCGGTTGGAGACCGCTGGAGTTCTCAGGGAACCCCATGAAGTACGACCTGTCAGTACTCTCAAGAAGCTGCAGCTAGAAGACGAAGGCATTTACAACTGCTACATTACCAACCCCTCCAGACCGCCACCGCGGCCACGGCAAGATTTACCTGCAGGTCTCTTAGAAGGTGAGTACTGAGTTGCTGTGGGACACTCACCGTTCTCTACAGCTTAGCTCAGGGCACTTCAAGGAGCTGTGACTCCCATCTCATCTTCAGGTGCTGTCTCTGTGGAAGACATCCACACCTTCCCTCTAAAGGGAACAAGTCAGTACGATCAAGTAAAAACCTTATTATGCCCATGTATGGATGAGGAAATCAGGTTCAAGAGCATACATTTCTTAAGATAAACATAATCTCTAATCTAATTAGATTAGTGTGATCTTAATGTCCACGAGTTAAATACTCACTTGTGTGTAAGGGGCTTTTGAAGGGGGCAGTGGTCTAGTTTGTCTTACTTACTAATGCCCTGTCCATGGAGAGGAATCAAATAATATCCCTCTCTATTTTGGGGAGCAGGGGCGAGATAGGGAATTTCCCTTTCAGCTCTATGATTCTGCTTCCCTTAGTACCCCCAGAGCGGGACTCCACGGTGGCGGTCATCGTGGGTGCCTCAGTGGGGGGTTTCTGGCTGTGGTCATTTGGTGTGCTGCAATGTGTGAGGAGGAAAAAGAGCAGAAGCTGAGCACGGATGACCTTGAAGACTGAAGAGGAAGAAGTAGGATGGTGTGAGGCAACGCGGAAGTACCGGCTGCCCTGCCCTCCCCGTCCTCTCTCTCACTCTGCGCTGTACAGTGTGACCGCGCTGCTTCTGGTGTGCTTCTTGAATAGGACCCAGAATCGACCTGGGCGCTCACTTCCCATGCCCCCAACCCCTATACCAAGGGTGATCGCCCTCCCTTTCATCTGAAAACCTGCCTTGGTATCTGAGATTGGGAGTCCAGGGAGAACAAGAGAAGGGCTGTAGCCTGTGAGTCTTTGAGGAAGAAAGACTTGTGTGGTCCCAAAGACAGGATGGGGAGGGCAGGTGGGAGAAGAGGCTGCTGACCATCTGTCTAAGGCTTGGTCTGGTGCGGATTTAAACTGTGGGAGTAGCAGTGTGTGGTGGGGGTTCTGTGCTGACGAGGCAACCTGAGGACCTGAGGAATGACTTGTGAAGATGGCTAGGGAACAGCCATCAGCTGGAGATGAAGGTGGGGCTCTACCTTTGTGAAGAGCACTATTTAAGAGGATGACTGTGCTATTCAGGGTACTCAAGGAAAAAGGAAAGATAGGGCTGAGTGTGTTTTCTGGATGCGAGCCTTGGCCACAGAACTGTGTTCTGGCCTCGTTTCTATCACTAGCCACTCCCAGAGAGGCTCTGGTTACTGTAGGCTGTGCTCCATGGGGGATGCTGGCGAGAGGTAGGATCCTATCCTACCCTAGGGCTGCCCTTAAGAGACCTGTGAGGAAGCTGCCGGGTGACGGCTTCACTGCATACAGACTGGCTGCCCTTCTCAAACAAGATGCTCACCTTGGCCTGTGCGATGCGACGCTCAACCCCTAGAACTGGGTGTGTTTGGGGAGCGGAAGCTGTGATAGGGAACCTTCTGTGTGGCTTTAGTTTGGGATTTTCGACAGGGTTCTCTGCCTGGCTTTTGGCAAGATGGAAGAGAGAAGCTGGAACGCTTTAAATATGAGAGCATATGCTGAAGGAGCCTCTGAACCNNNNNNNNNNNNNNNNNNNNNNNCCCACT

[illegible]

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TCAGTCCCCACCCAGTGTGGTCCCCAAGAAAGACGCCCAAGACTCACCCATTCTCAGCTGCTTCTAGGAGTGGCCACACACCCCTCTCCAGCTTGGG
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GGTCTGAAGGAAGCCATAAGGTGAGGGTGTAGGACCAGCTCCCTGCAGAACTCAGCCAGTGGCACTCTGTTTAAAGTGCCTGCAGTACCTGCAGCGTCC
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TCTGTGTGTGTTTGGGAGGTGTGAGGCGACAGTAAGGGTCTGTGAGCTAAAACATTAGGGAACAGCAAGAGATTAGGAGATGTGTGTGGGGTAGG
GCACTGGGGGGGGGGACTGGTCACTTCCCTC

Selection Cassette:

GGGCGCTCTAGAGGCCATAGCGGCCATTTAAATGGCGCGCCGGATCCCGGGCCGCTCTAGCTAGACTAGTCTAGCTAGAGAATTCCGCCCCCCCCC
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CGGTTTCCATATGGGATTGGTGGCGACGACTCCTGGAGCCCGTCAGTATCGGCGGAATTCAGCTGAGCGCGGTGCGTACCATTACCAGTTGGTCTG
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GCCTCTCCACCCAGGCGCTGGAATGTTTCCACCAATGTGAGCAGTGTGGTTTTGCAAGAGGAAGCAAAAAAGCCTCTCCACCCAGGCGCTGGAATGTTT
CACCAATGTGAGCAAAACCCCGCCAGCGTCTGTCAATTGGCGAATTCGAACGAGATGAGTCTGGGGCGCGGTCCCAGGTCACCTTCGCAT
ATTAAGGTGACGCGTGTGGCTCGAACACCGGACCGCTGACGAAATATGGGATCGGCCATTGAACAAGATGGAATGCAAGCTGAGGTTCCGCGCG
CTTGGGTGGAGAGGCTATTGGCTATGACTGGGCACAACAGACAATCGGCTGCTGTGATCCGCGGTGTTCCGGCTGTGACGCGAGGGGCGCGCGGT
CTTTTGTCAAGACCGACCTGTCCGGTGGCTGAATGAAGTGCAGGACGAGGACGCGCGGTATCGTGGCTGGCCACGACGGGCGTTCCTTGGCGAGC

Targeted Locus:

GGAAGAAGCTCCAGGGAGGACGGCGAGCAAACTTCCAACCTAAAGCAAAAGCCTGAACAAGGCCAGGTGGAGGGGAGGGAAGAGGAGACTGGGAG
ATTCCGTGTCCCTAGAGTCCACGCAAGGGGTGGGGCCTGGCAGGAGATGAGGCTGTGATGTGCAGCTGTGCCCCAGATGGGAAAGGCCACCCAGGA
GCTGCAACCCAGGTGCCAGAACTCTGCCCTAGAAGCAGCAGGAAGCCACTGGTGTCTCGGAGGTAGGGGATGGGAGTACAGCTTGGTTCTGGCTGCCTG
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