



Lexicon Genetics Incorporated – Genentech Project Materials

Genentech ID:	UNQ688	Date of Submission:	September 29, 2003
Lexicon Contract Name:	DNA106	Mutation Type:	☐ Standard Knock out
LexVision Name:	MSC249C1		X Conditional
Reference accessions:	ENSMUST00000034934 NM_026674	Is this gene X-linked?	No

Required Materials: ☐ pKOS clone DNA(s) pKOS-83
☐ Target Vector DNA N/A
☐ Targeted ES Cell DNA 1F8
☐ Genomic Map

Southern Blot Analysis:
External/Internal Probe Strategies

	<u>5' External</u>	<u>3' Internal</u>
Name of Probe:	42+44	52+53
Restriction Enzyme for Genomic Digest:	Bgl II	Spe I
Predicted Wild-type Band (kb):	11.3 kb	~24 kb
Predicted Mutant Band (kb): (<i>ES cell DNA</i>)	13.3 kb	~20 kb
Predicted Cre-excised band (kb): (<i>mice</i>)	11.1 kb	~24 kb
Probe Size (bp):	569 bp	300 bp

PCR Strategies:

For standard knockouts, give wildtype and mutant-specific strategies

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

5' loxP strategy		Distinguish Cre-excised and wt	
5' Primer Name:	47	5' Primer Name:	47
3' Primer Name:	10	3' Primer Name:	56
Predicted Wild-type Band (bp):	334 bp	Predicted Wild-type Band (bp):	472 bp
Predicted mutant band (bp)	405 bp (unexcised)	Predicted mutant band (bp)	239 bp

Primer sequences:**Southern probes**

42 5' – CTCCAGCCTGTCATTACTTG
44 5' – CCAATGGGAACAACATAAGTG
52 5' – CAGACATGGGCTATCATGGC
53 5' – GTTGTCCATTTGGAAGCACTG

PCR Genotyping

47 5' – CACTGAATCGTCCTTGTTGAG
10 5' – GAACAGCTCTTGGATACAGAC
56 5' – AGGCAGGCAAGCCAGGTC

Genomic Sequence Deleted:

ACCATGTGAAGGGGTCTTTCTCTAAAAAAGATCAAGATATTTGTTTCCTGTGCTTCTGTAACTCGTGACTTTTGTCTTCTACGTTCCAGTGCTTTCTTCT
GGTTGGTGTCTCTCCTGCTTTTCGTCCATGTTTGGTTTCTAGTGAGAGTCATTACTAACAACAGAGATGAATCAGTACAGAATTATCTGCTCATCTTCGG
AGCGTTGCTCTCTGTCTGTATCCAAGAGCTGTTCCAGGCTCGCATATTATAAGCTGTAAAGTAAGTTAAATGTTTGTATTTTCCCAGTTAGACTTGA
ATTATGATTTGGTGGTTGTTACATTTCTAGCC

Genomic Locus: (the deleted sequence represents nt 8710-9042-in the sequence below)

[illegible]

[illegible]

TAGAAGTGTCTGGAGAGATGGCTCAGCCTTTAAGAGCACCTACTGCTCTTGCAGAGGACCCGAATTCAGTTCACAGCACCACATAGTGGCTCACAACC
TCCTCTAACTCTACCTCTAGGGGATCCAACACCTGCAGATCCTATACATTGGTACACATAAACTCATGCAGGCACCAGTGTGCATATCTACATACAAA
CACACACACACACAAAATACACACACGCACCTCCCATGTCACACCTGTACATGGTACACATAAACTCATATAGGCACCAGTGTGCATGTCTACACAT
ACACATTCTCAGATGCACATGTAGCACAGACACACACACACACACACACACACACACACACATACACATACGATCCAGGTCTCTAT
GTAGAGTTAGCTCAGTCTGGCCCAGGGGTCTCACCTTGCAAACAGTTAATCCCTCACATCCTCTCTGTGCCCTCTGTGCCCATCCCTTGTTCAATTACCC
ACTCCTCATGCTCTGCACCTTTCTCAGTAGCCTTCCAGAGCTGGCTGGCCGGTGCTTCAGCAACAGCAGGCTGTTTCCTTCCCTTCTGCCTTCCAGTCCA
AAGACCCAACTCCTCCTCAGCCTTGACGACGACACTTCTCTGACGCTGTAGGAACTACGCCATGCCTTCCACATGCCAAGAAAGCAGACCCCTGTCCCTG
CAGTGAAACAGCATTCCCCAGACCTTGCAAATGAGAGCTGAAGTGGACGCCTAACAGGAAAAGGGTTTACCGGTGTTTTTCTTCTCTTTAGTTTCTGG
CTTGGGCTTTGGAATCATGAGTGGAGTGTTCCTTTGTGAACACCCTGTCTAACTCCTTGGGGCCAGGCACAGTGGGCATTTCATGGTGATTCTCCTCAG
TTCTTCTTAATTCAGGTATGTGCCAGGTATGTGCGTGTTCAGGGTCTGCTCTAAAGGATCATCTGTATTGCATTTCATTGGCTTCAGAATTCAGTGAA
TGATGATTTATGTTAAGCTTTTTAAAGGCAAGATATTCTTAGGCACTATAAGTGAAGGACCTGGGAGTGAGGGCCGGGGTTTGATTGGAGTGTTCGGA
ATACTATAGAATTTATCATGCATAAGATCTATATCTTCATTTTGTATTCTAAAATGTTAAAGTATATTTGAAATATTAGCAGTTCATTTGTATGAGATA
AAGTCTTTTTGTTTTGAAATTTTATATTCATCTCAATGTAAGCCTATTAGTCTTAATATTTTTCTTTATCTAGTACTAGGGATTAAATACATGGCCCC
CAGTTCTAAGTCTTAATATTTACTTAACTACATCTCAGTGCTTTTGTAGATTTACACAGTATGGTTAATCTTTAAGTTCAGAGAGAAGAAATAGATAGT
TAATTGTCTTTTATGCAGATACTATAAAGGCAAACTCTTCACATTGCTTTTCAATCACCAGCAATAATGATAACACATTTGTTTTATAATTGATAAT
TATTTTCATTAATAATTTACATTTGTTTAAAAAATAGAGGAAATATGATTTATTTATTTATCTATCTATTTTATTTATTTATTTATTTTGGTTTTT
TGGGACAGAGTTTCTCTGTATAGCCCTGGCTGCCCTGGAACCTCAATCTATATATCAGGCTGGCCTTGAACCTCAGAAATTCACCTGCCTCTGCCTCCCAA
GTACTGGGATTAAAGGCATGTGCCACCATGCCTGGCATCTGTTGTATTTATAATTGTCTGACCCACAGAAGTTATGTCATTGAAATACATGAACCTATA
AATCTATTTTTTTTCAACTAAATCAGTGTTTACACCCAGGCTAATGCTCATTAGGGAGGTTACCATCTTTAGGGAAATGCAACCAAAAAAATAGATAGAG
TTTCAGTAGATTTCAATAGAAATAAAAAAGGTTGTACAGAGAAATGGCCAATTTTAAAGCTGTAGTGGCTTAGAGCCATCTGTCTTATCATGGCCATGTC
CCTGAGTGCATTGACAGTCTCCACCATTCTCTGTTTCTTGTAGTTCGAATCTCTGCCTCTCCTATGGACATCATTGCTGTGAGCCACTCAAGAGAAC
CAGTTCTCTGTGAGCCAGCAAGTTAGTCTTCCCTGTTGGAAGGCTTTGACTTTCGTAGGCCTGCGGCATACAGTTCAGACTATTTAACTCCAGCTCT
GAGTTAAGGGGGAGTGTGTTAATAGGTCATGCTTAACGCTGCCTCCAACAGAGCCGATCACCTTTGTAAATATTTCTAACTGGAATATTTGTGACATG
AATTTTAATGACCAATAATGCTAGATTTGTAAAAAAAAGAAATCAAATATAGTTTAAAGTAGCTAAAGTCTGGGTGCTTCAGTTTAGAATTTATAAAAGTT
ACAGGTTAAGGGACGGTTT

Selection Cassette:

pL^FNeo selection cassette.

The sequence of the pL^F Neo selection cassette is shown below: Sfi sites that flank the cassette are underlined. The 5' and 3' **Lox P** sites are in **bold**. The 5' and 3' **FRT sites** are in **bold italics**. The floxed region (exon 2 nt 8710-9042 from the contig above) was subcloned into the *AscI* site (*italics, underlined*).

GGCCATAGCGGCCGGCCATAACTTCGTATAGCATAACATTATACGAAGTTATGGCGGCCCTCGAGCTTTCGGAAGTTC
CTATTTCGGAAGTTCCTATTCTCTAGAAAGTATAGGAAC***TTCTCGAGATCCGATATCGAATTC******CGCGCCCCCAGCTGGTT***
CTTTCCGCCTCAGAAGCCATAGAGCCCACCGCATCCCCAGCATGCCTGTATTGTCTTCCCAATCCTCCCCCTTGCTGTCT
CTGCCCCACCCCCACCCCAAGATAAGAAATGACACCTACTCAGACAATGCGATGCAATTTCCCTCATTTTATTAGGAAAGG
ACAGTGGGAGTGGCACCTTCCAGGGTCAAGGAAGGCACGGGGGAGGGGCAACACAGATGGCTGGCAACTAGAAAGG
CACAGTCGAGGCTGATCAGCGAGCTCTAGAGAATTGATCCCCTCAGAAGAAGTCTGTCGAAGAAGGCGATAGAAGGCGAT
GCGCTGCGAATCGGGAGCGGCGATACCGTAAAGCACGAGGAAGCGGTACGCCATTTCGCCGCCAAGCTCTTCAGCAAT
ATCACGGGTAGCCAACGCTATGTCTGATAGCGATCCGCCACACCCAGCCGGCCACAGTCGATGAATCCAGAAAAGCG
GCCATTTTCCACCATGATATTTCGGCAAGCAGGCATCGCCATGGGTACGACGAGATCCTCGCCGTCGGGCATGCGCGCC
TTGAGCCTGGCGAACAGTTTCGGCTGGCGCGAGCCCCTGATGCTCTTCGTCCAGATCATCCTGATCGACAAGACCGGCTT
CCATCCGAGTACGTGCTCGCTCGATGCGATGTTTCGCTTGGTGGTCAATGGGCAGGTAGCCGGATCAAGCGTATGCAG
CCGCCGATTGCATCAGCCATGATGGATACTTTCTCGGCAGGAGCAAGGTGAGATGACAGGAGATCCTGCCCGGCAC
TTCGCCCAATAGCAGCCAGTCCCTTCCCGCTTCAGTGACAACGTCGAGCACAGCTGCGCAAGGAACGCCCGTCTGTGGCC
AGCCACGATAGCCGCGCTGCCTCGTCTGCAAGTTCATTACAGGGCACCGGACAGGTGGTCTTGACAAAAAGAACCGGG
CGCCCCCTGCGCTGACAGCCGGAACACGGCGGCATCAGAGCAGCCGATTGTCTGTTGTGCCAGTTCATAGCCGAATAGC
CTCTCCCAAGGCGGCCGGAGAACCTGCGTGCAATCCATCTTGTTCATGCGCGATCCCATTATGACCTGCAGGTTCGAAA
GGCCCGGAGATGAGGAAGAGGAGAACAGCGCGGCAGACGTGCGCTTTTGAAGCGTGCAGAATGCCGGGGCCCTCCGGA
GGACCTTCGCGCCCCGCCCGCCCCCTGAGCCCGCCCCCTGAGCCCGCCCCGGACCCACCCCTTCCAGCCTCTGAGCCCA
GAAAGCGAAGGAGCCAAGCTGCTATTGGCCGCTGCCCAAAAGGCCTACCCGCTTCCATTGCTCAGCGGTGCTGTCCATC
TGCACGAGACTAGTGAGACGTGCTACTTCCATTTGTACGTCCTGCACGACGCGAGCTGCGGGGCGGGGGGGAACCTC
CTGACTAGGGGAGGAGTAGAAGGTGGCGCGAAGGGGCCACCAAGAAGCGAGCCGGTTGGCGCCTACCGGTGGATGT
GGAATGTGTGCGAGGCCAGAGGCCACTTGTGTAGCGCCAAGTGCCAGCGGGGCTGCTAAAGCGCATGCTCCAGACTG
CCTTGGGAAAAAGCGCTCCCTACCCGGTAGGGCGCGGGAATTTCGATATCGAATTCGAGCTCGGTACCCGGGGATCGA
AGTTCCTATTTCGGAAGTTCCTATTCTCTAGAAAGTATAGGAAC***TTCTCGACCTGCAGGCATGCAAGCTGATCCGGCGCGT***
ATAACTTCGTATAGCATAACATTATACGAAGTTATCCTCAGGCCAGCGAGGCC

Targeted Locus (UNEXCISED):

[illegible]

[illegible]

AAGCAGCATTTTATCATATAGCATATAGAAAAATAGCAGACTGCATTTCTCTTGACGCTTAATTGGGAATATGAATCATATATGTA AAAATATTTTAA
AATCATAAGATGGTATGGTTAAGTAGCAACATGAGACATTTGGCCTCTCAGCTCATATGCTATTATTACAATAAATGCAATTGGGGAGGAGTAGGACAAGCT
GGGGAGGGCAGGCTGAGGCTGCTGCTCAGTGATAGATGCTGTTTCTGGCGTGCTGACAAAGTGCTATAAAGAGGGTGAGAAGGATTTTGGTTCTTT
GGAGTGAAGACAGAGAGGAGGCTGGGAGAATATAGCCACAGCTGGAAAAACAACAGAATGCCAAGAAGTTGGAGATAAAGATATAAGATTTTGAG
AAAAAGAAAATCCAAAGTGGTAGATCCCCCAGGATAATGAGAAGTATTTACTGATCTCAGAAATGAAAACATTGCTGTTAATTCCATTGAGCTTAATC
CCTATTGGTTTATTACAAATATTTTAAATTTTCTCTTATGTAAACCTCAGCTAAGAGGAGTATAAATCTCCTTTGACTTAAGTTGCCAAAAAATATGC
TGGGTTTCAGGTAAATGGACTCTGGACTTAGAGTGTAACCTGATCAGAAGCTCATTTATTCTAGTTTTGAAGGGCTCTGTAAAGCCCTAAACACACA
CACACACACACACACACACACACACAAACAAAAACAAAAACAAAAACAAAAACCCACAGCTGTAAATTTTTTAAAGGATTTTCTCTTTTAGA
AAAGCCAGTGAGGGTTTGAAAAGCATAAACCCAGAGGAGGACATAGCACCCCTCGATGCGACTGTTGGCGTATGGTAAGTTAGACCCTGTGGTGTCTAG
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GGCTCACAACCTCTCTTAACCTCTACCTTAGGGGATCCAACACCTGCAGATCCTATACATTGGTACACATAAATCATGCAAGCACCAGTGTGCATATC
TACATACACAACACACACACACACAAATACACACAGCAGCTCCACATGCACACCTGTACATGGTACACATAAACTCATATAGGCACCAAGTGTGCA
TGTCTACACATACACATTCTCATATGCACATGTAGCACAGACACACACACACACACACACACACACACACACACACATACACACATACGATC
CAGGTCTCTATGTAGAGATTAGCTCAGTCTGGGCCAGGGGCTCAACCTTGCAAACAGTTAATCCCTCATACCTCTCTTGTCCCTTCTGTGCCCATCCCTT
GTTCAATTTACCCACTCTCATGCTCTGCATCTTCTCAGCTAGCCTTCCAGAGCTGGCTGGCCGCTCTCAGCAACAGCAGGCTGTTTCTCTCTCTCTG
CCTTCCAGTCCAAAGACCCAACTCTCTCAGCCTTGCAGCAGCACTTTCTCTGACGCTGTAGGAACATGCCATGCGCTTCCACATGCCAAGAAAGCAG
ACCTGTCCCTGCAGTGAACAGCATTCCCCAGACCTTGCAAATGAGAGCTGAAGTGGACGCCTAACAGGAAAAGGGTTTACCGGTGTTTTCTTCCTC
TTTAGTTTCTGGCTTGGGCTTGGGAATCATGAGTGGAGTGTTTTCTTTGTGAACACCTGTCTAACTCTTGGGGCCAGGCACATGCGGCTTCATGGT
GATTTCTCTCAGTTTCTTCTTAATTCAGGTATGTGCGAGTATGTCGGTCTCAGGGTTCTGCTCTAAAGGATCATCTGTATTGCAATTCATGGCTCAG
AATTCAAGTGAATGATGATTTATGTTAAGCTTTTTAAAGGCAAGATATTCTTAGGCACATAAGTGAAGGACCTGGGAGTGAGGCGCGGGTTTGATTG
GAGTGTCTCGGAATACTATAGAATTTATCATGCATAAGATCTATATCTTCATTTTGCTATTCTAAATGTTAAAGTATATTTGAAATATTAGCAGTTCAT
TTGATAGATAAAGTCTTTTGTGTTTTGAAATTTTATATTCATCTTCAATGTAAGCCTATTAGTCTTAATATTTTTTCTTTATCTAGTACTAGGGATTAA
ATACATGGCCCCCAGTCTAAGTCTTAATATTTACTTAATCTACATCTCAGTGCCTTTTTAGATTACACAGTATGGTTTTAATCTTTAAGTTCAGAGAGAA
GAAATGATAGATTAATTTGCTTTTATGCGAGTACTATTAAAGGACAAACTCTTCACATTGCTTTTCAATCACCAGCAAAATGATAACACATTGTTTTTA
TAATTAGAATATTATTTTCATTAATTTTACATTTTGTTTAAAAATAGAGGAAAATATGATTTATTGATTTATTTATTTATCTATCTATTTATTTATTT
ATTTTGGTTTTTTTGGGACAGAGTTTTCTCTGTATAGCCCTGGCTGGCTGGAACCTCAATCTATATATCAGCTGACCCCTTGAACCTCAGAAATTCACCTGCCT
CTGCTCCCCAAGTACTGGGATTTAAAGGCATGTGCCACCATGCCCTGCCCTCTGTTATTTAATTTGCTGTGCCACAGAGTATTGTCATTGAAATAC
ATGAACCTATAAATCTATTTTTTTTCAACTAAATCAGTGTTTACACCCAGGCTAATGCTCATTAGGGAGGTTACCATTCTTAGGAAATGCAACCAAAA
AATAGATAGAGTTTCAGTAGATTTCAATAGAATAAAAAGGTTGTACAGAGAAATGGCCAAATTTTAAAGCTGTAGTGGCTTAGAGCCATCTGTCTTATC
ATGCCCATGTCCTTGAGTGCATTGACAGCTCTCCACCACTCTCTGTTTCTGTTGATTGTAATCTGAATCTCTGCCTCTCCTATGGACATCATTGCTGTGAGCCAC
TCAAGAGAACCAAGTTCTCTGTGTCAGCCAGCAAGTTAGTCTTCTCTGTTGGAAGAGTCTTTGACTTTCTGAGGCCTGCGGCATACAGTTCAGACTATTTA
ACTCCAGCTCTGAGTTAAGGGGGAGTGTGTTAATAGTGCATGCTTTAAGCTGCCTCAACAGAG

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