

1101-013_ST25
SEQUENCE LISTING

<110> University of Tennessee Research Foundation
Edwards, J. Lannett
Schrick, F. Neal
Rispoli, Louisa A.

<120> Antibody for Skewing Sex Ratio and Methods of Use Thereof

<130> 1101-013

<150> US 61/942,020
<151> 2014-02-19

<150> US 62/065,797
<151> 2014-10-20

<160> 27

<170> PatentIn version 3.5

<210> 1
<211> 20
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthesized immunograde peptide

<400> 1

Cys Thr Lys Arg Thr Gly Lys Pro Gln Gly Ser Arg Val Val Arg Lys
1 5 10 15

His Leu Pro Pro
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<210> 2
<211> 21
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthesized immunograde peptide

<400> 2

Cys Lys Thr Ser Ser Gln Leu Arg Pro Pro Lys Asn Val Lys Val Ala
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Arg Ala Ser Ala Arg
20

<210> 3
<211> 20
<212> PRT
<213> Artificial Sequence

<220>

<223> Synthesized immunograde peptide

<400> 3

Cys Lys Val Asn Glu Glu Leu Asn Gln Asn Gly Pro Glu Glu Val Pro
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Glu Ser Val Glu
20

<210> 4

<211> 114

<212> PRT

<213> Bos taurus

<400> 4

Met Thr Lys Arg Thr Gly Lys Pro Gln Gly Ser Arg Val Val Arg Lys
1 5 10 15

His Leu Pro Pro Val Thr Arg Asp Lys Arg Met Lys Thr Ser Ser Gln
20 25 30

Leu Arg Pro Pro Lys Asn Val Lys Val Ala Arg Ala Ser Ala Arg Val
35 40 45

Asn Asn His Leu Arg Ala Lys Leu Thr Lys Lys Thr Ser Gln Lys Pro
50 55 60

Pro Thr Thr Arg Asn Leu Arg Lys Asn Gly Gly Ser Lys Leu Cys Ser
65 70 75 80

Gln Cys Cys Lys Val Asn Glu Glu Leu Asn Gln Asn Gly Pro Glu Glu
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Val Pro Glu Ser Val Glu Ile Pro Val Ile Pro Ala Gly Pro Val Gly
100 105 110

Ser Gln

<210> 5

<211> 563

<212> DNA

<213> Bos taurus

<400> 5

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taggaaacac ctgcctcctg ttacccggga caaaaggatg aagacctcct ctcaactgag 180

1101-013_ST25

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agaggagggtc ccagagagtg tggagatccc tgtcattcca gcgggaccgg tgggcagcca 420
gtgacttgaa ggcatggctc gagacctcag aattcttcgg gggctcttgcc gctgagtact 480
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<220>
<223> qPCR primer 1

<400> 6
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<210> 7
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<213> Artificial Sequence

<220>
<223> qPCR primer 2

<400> 7
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<210> 8
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<212> DNA
<213> Artificial Sequence

<220>
<223> nucleic acid probe

<400> 8
agccctgtgc cctg 14

<210> 9
<211> 114
<212> PRT
<213> Bos taurus

<400> 9

Met Thr Lys Arg Thr Gly Lys Pro Gln Gly Ser Arg Val Val Arg Lys
1 5 10 15

His Leu Pro Pro Val Thr Arg Asp Lys Arg Met Lys Thr Ser Ser Gln

20

25

30

Leu Arg Pro Pro Lys Asn Val Lys Val Ala Arg Ala Ser Ala Arg Val
 35 40 45

Asn Asn His Leu Gln Ala Lys Leu Thr Lys Lys Thr Ser Gln Lys Pro
 50 55 60

Pro Thr Thr Arg Asn Leu Ser Lys Asn Gly Gly Ser Lys Leu Cys Ser
 65 70 75 80

Gln Cys Cys Lys Val Asn Glu Glu Leu Asn Gln Asn Gly Pro Glu Glu
 85 90 95

Val Pro Glu Ser Val Glu Ile Pro Val Ile Pro Ala Gly Pro Val Gly
 100 105 110

Ser Gln

<210> 10
 <211> 114
 <212> PRT
 <213> Bos taurus

<400> 10

Met Thr Lys Arg Thr Gly Lys Pro Gln Gly Ser Arg Val Val Arg Lys
 1 5 10 15

His Leu Pro Pro Val Thr Arg Gly Lys Arg Met Lys Thr Ser Ser Gln
 20 25 30

Leu Arg Pro Lys Thr Asn Val Lys Val Ala Lys Ala Ser Ala Arg Val
 35 40 45

Asn Asn His Leu Gln Ala Lys Leu Thr Lys Lys Thr Ser Gln Lys Pro
 50 55 60

Pro Thr Thr Arg Asn Leu Arg Lys Ile Gly Gly Ser Lys Leu Cys Ser
 65 70 75 80

Gln Gly Ser Lys Val Asn Glu Glu Leu Asn Gln Asn Gly Pro Glu Glu
 85 90 95

Val Pro Glu Ser Val Glu Thr Pro Val Ile Pro Ala Gly Pro Val Gly
 100 105 110

Ser Gln

1101-013_ST25

<210> 11
 <211> 114
 <212> PRT
 <213> Bos taurus

<400> 11

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His Leu Pro Pro Val Thr Arg Gly Lys Arg Met Lys Thr Ser Ser Gln
 20 25 30

Leu Arg Ala Lys Thr Asn Val Lys Val Ala Lys Ala Ser Ala Arg Val
 35 40 45

Asn Asn His Leu Gln Ala Lys Leu Thr Lys Lys Thr Ser Gln Lys Pro
 50 55 60

Pro Thr Thr Arg Asn Leu Arg Lys Ile Gly Gly Ser Lys Leu Cys Ser
 65 70 75 80

Gln Gly Ser Lys Val Asn Glu Glu Leu Asn Gln Asn Gly Pro Glu Glu
 85 90 95

Val Pro Glu Ser Val Glu Met Pro Val Ile Pro Ala Gly Pro Val Gly
 100 105 110

Ser Gln

<210> 12
 <211> 114
 <212> PRT
 <213> Bos taurus

<400> 12

Met Thr Lys Arg Thr Gly Lys Pro Gln Gly Ser Arg Val Val Arg Lys
 1 5 10 15

His Leu Pro Arg Phe Thr Arg Asp Lys Arg Met Lys Thr Ser Ser Gln
 20 25 30

Leu Arg Pro Lys Thr Asn Val Lys Val Ala Arg Ala Ser Ala Arg Val
 35 40 45

Asn Asn His Leu Gln Ala Lys Leu Thr Lys Lys Thr Ser Gln Lys Pro
 50 55 60

1101-013_ST25

Pro Thr Thr Arg Asn Leu Arg Lys Ile Arg Gly Ser Lys Leu Cys Ser
65 70 75 80

Gln Cys Ser Lys Val Asn Glu Val Leu Asn Gln Asn Gly Pro Glu Glu
85 90 95

Val Pro Glu Ser Val Glu Met Pro Val Ile Pro Val Gly Pro Val Gly
100 105 110

Ser Gln

<210> 13
<211> 114
<212> PRT
<213> Pantholops hodgsonii

<400> 13

Met Thr Lys Val Thr Gly Lys Gln Gln Gly Ser Arg Val Val Met Lys
1 5 10 15

His Leu Ala Pro Val Thr Trp Asn Lys Arg Met Lys Thr Ser Ser Gln
20 25 30

Leu Arg Ser Lys Lys Asn Val Lys Val Ala Arg Val Pro Val Arg Val
35 40 45

Asn Asn His Leu Gln Ala Lys Leu Thr Lys Lys Thr Ser Gln Lys Pro
50 55 60

Pro Thr Thr Arg Lys Leu Lys Lys Ile Arg Gly Pro Lys Leu Cys Ser
65 70 75 80

Arg Cys Ser Lys Val Asn Glu Lys Leu Asn Gln Asn Gly Pro Glu Glu
85 90 95

Val Pro Glu Ser Val Glu Thr Pro Val Ile Pro Ala Gly Thr Val Gly
100 105 110

Ser Gln

<210> 14
<211> 114
<212> PRT
<213> Pantholops hodgsonii

<400> 14

1101-013_ST25

Met Thr Lys Val Thr Gly Lys Pro Gln Gly Ser Arg Val Val Met Lys
1 5 10 15

His Leu Pro Pro Val Thr Trp Asp Asn Arg Met Lys Thr Ser Ser Gln
20 25 30

Leu Arg Ser Lys Lys Asn Val Lys Val Ala Arg Val Pro Val Arg Val
35 40 45

Asp Asn His Leu Gln Ala Lys Leu Thr Lys Lys Thr Ser Gln Lys Pro
50 55 60

Pro Thr Thr Arg Lys Leu Lys Lys Ile Arg Gly Pro Lys Leu Cys Ser
65 70 75 80

Trp Cys Ser Lys Val Asn Glu Glu Leu Asn Gln Asn Gly Pro Glu Glu
85 90 95

Val Pro Glu Ile Leu Gln Thr Pro Val Ile Pro Ala Gly Thr Val Gly
100 105 110

Arg Gln

<210> 15
<211> 119
<212> PRT
<213> Bos taurus

<400> 15

Met Thr Lys Val Thr Gly Lys Pro Gln Gly Ser Arg Val Val Arg Lys
1 5 10 15

His Leu Pro Pro Val Thr Gln Asp Lys Arg Met Glu Thr Ser Ser Gln
20 25 30

Leu Arg Ser Lys Lys His Val Lys Val Ala Arg Val Ser Val Arg Val
35 40 45

Asn Asn His Leu Gln Ala Lys Met Thr Lys Lys Thr Ser Gln Lys Pro
50 55 60

Pro Thr Thr Arg Asn Leu Arg Lys Ile Arg Gly Ser Lys Leu Cys Ser
65 70 75 80

Gln Cys Ser Lys Val Asn Glu Glu Leu Asn Gln Asn Gly Pro Val Glu
85 90 95

1101-013_ST25

Val Pro Asp Cys Gly His Pro Cys His Ser Ser Gly Thr Gly Trp Gln
100 105 110

Pro Val Thr Ser Arg His Gly
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<210> 16
<211> 93
<212> PRT
<213> Bos taurus

<400> 16

Met Glu Thr Ser Ser Gln Leu Arg Ser Lys Lys His Val Lys Val Ala
1 5 10 15

Arg Val Ser Val Arg Val Asn Asn His Leu Gln Ala Lys Met Thr Lys
20 25 30

Lys Thr Ser Gln Lys Pro Pro Thr Thr Arg Asn Leu Arg Lys Ile Arg
35 40 45

Gly Ser Lys Leu Cys Ser Gln Cys Ser Lys Val Asn Glu Glu Leu Asn
50 55 60

Gln Asn Gly Pro Val Glu Val Pro Asp Cys Gly His Pro Cys His Ser
65 70 75 80

Ser Gly Thr Gly Trp Gln Pro Val Thr Ser Arg His Gly
85 90

<210> 17
<211> 607
<212> DNA
<213> Bos taurus

<400> 17

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gcctcaaaat gactaagcgg actgggaagc cccaaggctc cagagtagtt aggaaacacc	180
tgctcctgt taccgggac aaaaggatga agacctcctc tcaactgagg cccccaaaaa	240
atgtcaaggt ggccaggga agtgcgagag tgaataatca ccttcaggca aagctgacca	300
agaaaacttc tcagaaacca cccaccacaa ggaaccttag caaaaacgga ggctcaaagc	360
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cagagagtgt ggagatccct gtcattccag cgggaccggt gggcagccag tgacttgaag	480
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1101-013_ST25

cagacgtgac tattatacca actccataca ttaagaatga aaataaaaatc aacctgatgt 600
gaaatta 607

<210> 18
<211> 415
<212> DNA
<213> Bos taurus

<400> 18
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aagtgcgaga gtgaataatc acctacaggc aaagctgacc aagaaaactt ctcagaaacc 240
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<210> 19
<211> 666
<212> DNA
<213> Bos taurus

<400> 19
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acagacattg actattatac caactgcata cattaagaat gaaaaataaaa tcaacctgat 660
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<210> 20
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<212> DNA
<213> Bos taurus

1101-013_ST25

<400> 20
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 aatgaaattc attcttgatt gtcagttatt ttgagactat ggaaaacggt cttatgttag 180
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 tagagacctc agaaatcttc ggggtcttgc cgctgaatac tgtccaacag tacagacgtt 1020
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<210> 21
 <211> 498
 <212> DNA
 <213> *Pantholops hodgsonii*

<400> 21
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 aggcccaaaag ctctgtagcc ggtgctccaa ggtgaatgaa aagctgaatc agaattggacc 300
 agaggagggtc ccagagagtg tggagacccc tgtcattcca gcaggaacag tgggcagcca 360
 gtgacctcaa agcatggcta gagacctcag aaatgttcag gggctcttgc gcttagtact 420
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1101-013_ST25

<210> 22
 <211> 500
 <212> DNA
 <213> *Pantholops hodgsonii*

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 gtccaagaaa aatgtcaagg tggccagggt acctgtgaga gtggataatc accttcaggc 180
 aaagctgacc aagaaaaactt ctcagaaacc acccaccaca aggaaactta aaaaaatcag 240
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 gtgacctcag agcatggcta gagacctcag aaatcttctg gggcttggc gctgagtact 420
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<210> 23
 <211> 476
 <212> DNA
 <213> *Bos taurus*

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 ggctagagac ctcagaaatc ttcggggggc ttgctgctga gtactagcca acagtacaga 420
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<210> 24
 <211> 476
 <212> DNA
 <213> *Bos taurus*

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 gtcaagggtg ccagggttaag tgtgagagtg aataatcacc ttcaggcaaa gatgaccaag 180
 aaaacttctc agaaaccgcc caccacaagg aaccttagaa aaatcagagg ctcaaagctc 240
 tgtagccagt gttccaaggt aaatgaagag ctgaatcaga acggaccagt ggagggtccca 300

1101-013_ST25

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 ggctagagac ctcagaaaatc ttcggggggc ttgctgctga gtactagcca acagtacaga 420
 cattgactat tataccaact gcatacatta agaatgaaaa taaaatcaac ctgatg 476

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 <211> 27
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<220>
 <223> forward primer for GX1 cDNA

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<210> 26
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 <212> DNA
 <213> Artificial sequence

<220>
 <223> reverse primer for GX1 cDNA

<400> 26
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<210> 27
 <211> 33
 <212> DNA
 <213> Artificial sequence

<220>
 <223> reverse primer for GX1 cDNA for in vitro translation

<400> 27
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