SEQUENCE LISTING

<110> Ironwood Pharmaceuticals, Inc.
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Fretzen, Angelika
Kessler, Marco
Zimmer, Daniel P.

<120> Treatment for Gastrointestinal Disorders

<130> 223355-077US1-304578

<150> 61/259264
<151> 2009-11-09

<160> 16

<170> PatentIn version 3.5

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<211> 13
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<220>
<223> Artificial sequence

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<222> (1)..(1)
<223> Xaa1 is Asn, D-Asn, Gln, D-Gln, Pro, Ala, beta-Ala, D-Ala, Val, D-Val, Gly, Thr, D-Thr, Asp, D-Asp, gamma-carboxylated Asp, Glu, D-Glu, gamma-carboxylated Glu, alpha-aminosuberic acid (Asu), alph-aminoadipic acid (Aad), a-aminopimelic acid (Apm), or is

<220>
<221> VARIANT
<222> (1)..(1)
<223> if Xaa1 is present, Xaa1 may be modified on its amino group by methyl, ethanedioic acid, propanedioic acid, butanedioic acid, pentanedioic acid, hexanedioic acid, heptanedioic acid or octanedioic acid

<220>
<221> VARIANT
<222> (1)..(2)
<223> if Xaa1 is absent and Xaa2 is present, then Xaa2 may be modified on its amino group by methyl, ethanedioic acid, propanedioic acid, butanedioic acid, pentanedioic acid, hexanedioic acid, heptanedioic acid or octanedioic acid

<220>
<221> VARIANT
<222> (1)..(3)
<223> if both Xaa1 and Xaa2 are absent, then Xaa3 may be modified on its amino group by methyl, ethanedioic acid, propanedioic acid, butanedioic acid, pentanedioic acid, hexanedioic acid, heptanedioic acid or octanedioic acid

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<222> (2)..(3)
<223> Xaa2 and Xaa3 are independently Asp, gamma-carboxylated Asp, Glu, gamma-carboxylated Glu, Asu, Aad, Apm, or absent

<220>

<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa4 is Cys or D-Cys

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<222> (6)..(6)
<223> Xaa6 is P-Ser, P-Thr, P-homo-Ser, 4-hydroxyvaline phosphate, P-homo-Thr, P-Cys or P-Tyr

<220>
<221> VARIANT
<222> (6)..(6)
<223> Xaa6 may be any amino acid that may be phosphorylated

<220>
<221> VARIANT
<222> (6)..(6)
<223> Xaa6 may be any amino acid that may be phosphorylated

<220>
<221> MISC_FEATURE
<222> (7)..(7)
<223> Xaa7 is Tyr, Leu, Phe or Ile

<220>
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<222> (8)..(8)
<223> Xaa8 is Cys or D-Cys

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<221> MISC_FEATURE
<222> (14)..(14)
<223> Xaa14 is Thr, Ala or Phe

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<221> MISC_FEATURE
<222> (16)..(16)
<223> Xaa16 is Cys or D-Cys

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<221> MISC_FEATURE
<222> (17)..(17)
<223> Xaa17 is Tyr, D-Tyr, or is absent

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Cys Cys Ser Leu Cys Cys Asn Pro Ala Cys Thr Gly Cys
1 5 10

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<223> (Peptide 5)

<220>
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<222> (5)..(5)
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<400> 2

Asp Asp Cys Cys Ser Leu Cys Cys Asn Pro Ala Cys Thr Gly Cys Tyr

1 5 10 15

<210> 3
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<220>
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<222> (5)..(5)
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<400> 3

Asp Asp Cys Cys Ser Leu Cys Cys Asn Pro Ala Cys Thr Gly Cys
1 5 10 15

<210> 4
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<212> PRT
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<223> (Peptide 6)

<220>
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<400> 4

Asp Asp Cys Cys Ser Tyr Cys Cys Asn Pro Ala Cys Thr Gly Cys Tyr
1 5 10 15

<210> 5
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<400> 5

Asp Asp Cys Cys Ser Tyr Cys Cys Asn Pro Ala Cys Thr Gly Cys
1 5 10 15

<210> 6
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<223> (Peptide 1)

<220>
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Cys Cys Ser Leu Cys Cys Asn Pro Ala Cys Thr Gly Cys Tyr
1 5 10

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<400> 7

Cys Cys Ser Leu Cys Cys Asn Pro Ala Cys Thr Gly Cys
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<400> 8

Cys Cys Ser Tyr Cys Cys Asn Pro Ala Cys Thr Gly Cys Tyr
1 5 10

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Cys Cys Ser Tyr Cys Cys Asn Pro Ala Cys Thr Gly Cys
1 5 10

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<223> (Dephosphorylated Peptide 1)

<400> 10

Cys Cys Ser Leu Cys Cys Asn Pro Ala Cys Thr Gly Cys Tyr
1 5 10

<210> 11
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<223> (Dephosphoylated Peptide 2)

<400> 11

Cys Cys Ser Leu Cys Cys Asn Pro Ala Cys Thr Gly Cys
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<220>
<223> (Peptide 3)

<400> 12

Cys Cys Glu Leu Cys Cys Asn Pro Ala Cys Thr Gly Cys Tyr
1 5 10

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<220>
<223> (Peptide 4)

<400> 13

Cys Cys Glu Phe Cys Cys Asn Pro Ala Cys Thr Gly Cys Tyr
1 5 10

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<212> PRT
<213> Escherichia coli

<400> 14

Asn Thr Phe Tyr Cys Cys Glu Leu Cys Cys Asn Pro Ala Cys Ala Gly
1 5 10 15

Cys Tyr

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<223> PHOSPHORYLATION

<220>
<221> MISC_FEATURE
<222> (4)..(4)
<223> Xaa is Tyr or Leu

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<221> MISC_FEATURE
<222> (14)..(14)
<223> Xaa is Tyr, D-Tyr, or is absent

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Cys Cys Ser Xaa Cys Cys Asn Pro Ala Cys Thr Gly Cys Xaa
1 5 10

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<223> radiolabelled Peptide 2

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<222> (4)..(4)
<223> [13C6, 15N] Radiolabelled.

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<221> MISC_FEATURE
<222> (9)..(9)
<223> [13C6, 15N] Radiolabelled.

<400> 16

Cys Cys Ser Leu Cys Cys Asn Pro Ala Cys Thr Gly Cys
1 5 10