

pxwo 391_2023_ST25
SEQUENCE LISTING

<110> CENTRO DE ESTUDIOS CIENTÍFICOS DE VALDIVIA
San Martín, Alejandro
Barros, Luis Felipe
Ceballo, Sebastián

<120> GENETICALLY ENCODED PROBE FOR QUANTIFICATION OF PYRUVATE
CONCENTRATION WITH HIGH SPATIAL AND TEMPORAL RESOLUTION, AND
METHODS USING THE SAME FOR QUANTIFYING PYRUVATE TRANSPORT,
CELLULAR PYRUVATE PRODUCTION AND CONSUMPTION, AND MITOCHONDRIAL
PYRUVATE CONSUMPTION IN INTACT CELLS

<130> PXWO 391/2013

<160> 8

<170> PatentIn version 3.5

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<213> Escherichia coli

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Ile Asn Leu Glu Val Lys Glu Gly Ala Pro Leu Pro Phe Ser Tyr Asp
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Ile Leu Thr Thr Ala Phe Ala Tyr Gly Asn Arg Ala Phe Thr Lys Tyr
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Pro Asp Asp Ile Pro Asn Tyr Phe Lys Gln Ser Phe Pro Glu Gly Tyr
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Ser Trp Glu Arg Thr Met Thr Phe Glu Asp Lys Gly Ile Val Lys Val
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Lys Ser Asp Ile Ser Met Glu Glu Asp Ser Phe Ile Tyr Glu Ile His
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Leu Lys Gly Glu Asn Phe Pro Pro Asn Gly Pro Val Met Gln Lys Lys
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Thr Thr Gly Trp Asp Ala Ser Thr Glu Arg Met Tyr Val Arg Asp Gly
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Val Leu Lys Gly Asp Val Lys His Lys Leu Leu Leu Glu Gly Gly Gly
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His His Arg Val Asp Phe Lys Thr Ile Tyr Arg Ala Lys Lys Ala Val
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 Lys Leu Pro Asp Tyr His Phe Val Asp His Arg Ile Glu Ile Leu Asn
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 His Asp Lys Asp Tyr Asn Lys Val Thr Val Tyr Glu Ser Ala Val Ala
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 Arg Asn Ser Thr Asp Gly Met Asp Glu Leu Tyr Lys Arg Ser Gly Thr
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 Thr Ser Leu Tyr Lys Lys Ala Gly Ser Glu Phe Ala Leu Gly Thr Met
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 Ala Tyr Ser Lys Ile Arg Gln Pro Lys Leu Ser Asp Val Ile Glu Gln
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 Gln Leu Glu Phe Leu Ile Leu Glu Gly Thr Leu Arg Pro Gly Glu Lys
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 Leu Pro Pro Glu Arg Glu Leu Ala Lys Gln Phe Asp Val Ser Arg Pro
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 Glu Ser Asn Ala Val Leu Gln Tyr Gln Ile Ala Val Thr Glu Ala Ala
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 His Asn Val Val Leu Leu His Leu Leu Arg Cys Met Glu Pro Met Leu
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 Ala Gln Asn Val Arg Gln Asn Phe Glu Leu Leu Tyr Ser Arg Arg Glu
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Met Leu Pro Leu Val Ser Ser His Arg Thr Arg Ile Phe Glu Ala Ile
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Met Ala Gly Lys Pro Glu Glu Ala Arg Glu Ala Ser His Arg His Leu
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595 600 605

Lys Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr Val Gln
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Tyr Asn Tyr Asn Ser His Asn Val Tyr Ile Thr Ala Asp Lys Gln Lys
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690 695 700

Gly Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly Asp
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Gly Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Tyr Gln Ser Ala
725 730 735

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Ile Asn Leu Glu Val Lys Glu Gly Ala Pro Leu Pro Phe Ser Tyr Asp
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Pro Asp Asp Ile Pro Asn Tyr Phe Lys Gln Ser Phe Pro Glu Gly Tyr
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Lys Ser Asp Ile Ser Met Glu Glu Asp Ser Phe Ile Tyr Glu Ile His
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Val Leu Lys Gly Asp Val Lys His Lys Leu Leu Leu Glu Gly Gly Gly
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His His Arg Val Asp Phe Lys Thr Ile Tyr Arg Ala Lys Lys Ala Val
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Ile Asn Leu Glu Val Lys Glu Gly Ala Pro Leu Pro Phe Ser Tyr Asp
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Ile Leu Thr Thr Ala Phe Ala Tyr Gly Asn Arg Ala Phe Thr Lys Tyr
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Pro Asp Asp Ile Pro Asn Tyr Phe Lys Gln Ser Phe Pro Glu Gly Tyr
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Ser Trp Glu Arg Thr Met Thr Phe Glu Asp Lys Gly Ile Val Lys Val
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Lys Ser Asp Ile Ser Met Glu Glu Asp Ser Phe Ile Tyr Glu Ile His
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Leu Lys Gly Glu Asn Phe Pro Pro Asn Gly Pro Val Met Gln Lys Lys
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Thr Thr Gly Trp Asp Ala Ser Thr Glu Arg Met Tyr Val Arg Asp Gly
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Val Leu Lys Gly Asp Val Lys His Lys Leu Leu Leu Glu Gly Gly Gly
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His His Arg Val Asp Phe Lys Thr Ile Tyr Arg Ala Lys Lys Ala Val
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Lys Leu Pro Asp Tyr His Phe Val Asp His Arg Ile Glu Ile Leu Asn
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His Asp Lys Asp Tyr Asn Lys Val Thr Val Tyr Glu Ser Ala Val Ala
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Arg Asn Ser Thr Asp Gly Met Asp Glu Leu Tyr Lys Arg Ser Gly Thr
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Thr Ser Leu Tyr Lys Lys Ala Gly Ser Glu Phe Ala Leu Gly Thr Met
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Ala Tyr Ser Lys Ile Arg Gln Pro Lys Leu Ser Asp Val Ile Glu Gln
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Gln Leu Glu Phe Leu Ile Leu Glu Gly Thr Leu Arg Pro Gly Glu Lys
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Leu Pro Pro Glu Arg Glu Leu Ala Lys Gln Phe Asp Val Ser Arg Pro
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Glu Ser Asn Ala Val Leu Gln Tyr Gln Ile Ala Val Thr Glu Ala Ala
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Lys Gly Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys Leu
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Glu Tyr Asn Tyr Asn Ser His Asn Val Tyr Ile Thr Ala Asp Lys Gln
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Lys Asn Gly Ile Lys Ala Asn Phe Lys Ile Arg His Asn Ile Glu Asp
675 680 685

Gly Gly Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile Gly
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Asp Gly Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Tyr Gln Ser
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Ala Leu Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu Leu
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Glu Phe Val Thr Ala Ala Gly Ile Thr Leu Gly Met Asp Glu Leu Tyr
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Ile Asn Leu Glu Val Lys Glu Gly Ala Pro Leu Pro Phe Ser Tyr Asp
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Ile Leu Thr Thr Ala Phe Ala Tyr Gly Asn Arg Ala Phe Thr Lys Tyr
 65 70 75 80

Pro Asp Asp Ile Pro Asn Tyr Phe Lys Gln Ser Phe Pro Glu Gly Tyr
 85 90 95

Ser Trp Glu Arg Thr Met Thr Phe Glu Asp Lys Gly Ile Val Lys Val
 100 105 110

Lys Ser Asp Ile Ser Met Glu Glu Asp Ser Phe Ile Tyr Glu Ile His
 115 120 125

Leu Lys Gly Glu Asn Phe Pro Pro Asn Gly Pro Val Met Gln Lys Lys
 130 135 140

Thr Thr Gly Trp Asp Ala Ser Thr Glu Arg Met Tyr Val Arg Asp Gly
 145 150 155 160

Val Leu Lys Gly Asp Val Lys His Lys Leu Leu Leu Glu Gly Gly Gly
 165 170 175

His His Arg Val Asp Phe Lys Thr Ile Tyr Arg Ala Lys Lys Ala Val
 180 185 190

Lys Leu Pro Asp Tyr His Phe Val Asp His Arg Ile Glu Ile Leu Asn
 195 200 205

His Asp Lys Asp Tyr Asn Lys Val Thr Val Tyr Glu Ser Ala Val Ala
 210 215 220

Arg Asn Ser Thr Asp Gly Met Asp Glu Leu Tyr Lys Arg Ser Gly Thr
 Página 10

225 230 240

Met Ala Tyr Ser Lys₂₄₅ Ile Arg Gln Pro Lys₂₅₀ Leu Ser Asp Val Ile₂₅₅ Glu

Gln Gln Leu Glu₂₆₀ Phe Leu Ile Leu Glu₂₆₅ Gly Thr Leu Arg Pro₂₇₀ Gly Glu

Lys Leu Pro₂₇₅ Pro Glu Arg Glu Leu₂₈₀ Ala Lys Gln Phe Asp₂₈₅ Val Ser Arg

Pro Ser₂₉₀ Leu Arg Glu Ala Ile₂₉₅ Gln Arg Leu Glu Ala₃₀₀ Lys Gly Leu Leu

Leu₃₀₅ Arg Arg Gln Gly₃₁₀ Gly Thr Phe Val Gln₃₁₅ Ser Ser Leu Trp Gln₃₂₀

Ser Phe Ser Asp₃₂₅ Leu Val Glu Leu Leu₃₃₀ Ser Asp His Pro Glu₃₃₅ Ser

Gln Tyr Asp₃₄₀ Leu Leu Glu Thr Arg His₃₄₅ Ala Leu Glu Gly Ile₃₅₀ Ala Ala

Tyr Tyr Ala₃₅₅ Ala Leu Arg Ser Thr₃₆₀ Asp Glu Asp Lys Glu₃₆₅ Arg Ile Arg

Glu Leu₃₇₀ His His Ala Ile Glu₃₇₅ Leu Ala Gln Gln Ser₃₈₀ Gly Asp Leu Asp

Ala Glu Ser Asn Ala Val₃₉₀ Leu Gln Tyr Gln Ile₃₉₅ Ala Val Thr Glu Ala₄₀₀

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Leu Ala Gln Asn₄₂₀ Val Arg Gln Asn Phe₄₂₅ Glu Leu Leu Tyr Ser₄₃₀ Arg Arg

Glu Met Leu₄₃₅ Pro Leu Val Ser Ser₄₄₀ His Arg Thr Arg Ile₄₄₅ Phe Glu Ala

Ile Met₄₅₀ Ala Gly Lys Pro Glu₄₅₅ Glu Ala Arg Glu Ala₄₆₀ Ser His Arg His

Leu Ala Phe Ile Glu Glu₄₇₀ Ile Leu Leu Asp Arg₄₇₅ Ser Arg Glu Glu Ser₄₈₀

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505

510

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Val Thr Thr Leu Gly Tyr Gly Leu Gln Cys Phe Ala Arg Tyr Pro Asp
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His Met Lys Gln His Asp Phe Phe Lys Ser Ala Met Pro Glu Gly Tyr
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Val Gln Glu Arg Thr Ile Phe Phe Lys Asp Asp Gly Asn Tyr Lys Thr
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Arg Ala Glu Val Lys Phe Glu Gly Asp Thr Leu Val Asn Arg Ile Glu
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Leu Lys Gly Ile Asp Phe Lys Glu Asp Gly Asn Ile Leu Gly His Lys
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Leu Glu Tyr Asn Tyr Asn Ser His Asn Val Tyr Ile Thr Ala Asp Lys
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Gln Lys Asn Gly Ile Lys Ala Asn Phe Lys Ile Arg His Asn Ile Glu
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Asp Gly Gly Val Gln Leu Ala Asp His Tyr Gln Gln Asn Thr Pro Ile
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Gly Asp Gly Pro Val Leu Leu Pro Asp Asn His Tyr Leu Ser Tyr Gln
 690 695 700

Ser Ala Leu Ser Lys Asp Pro Asn Glu Lys Arg Asp His Met Val Leu
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