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**Molybdenum cofactor biosynthesis protein [EC: MoaC]**

-Went to Kegg Pathway, chose Arabidopsis thaliana, and chose gene MoaC. Took AA of result and blasted sequence (390 letter query) against Vaccinium corymbosum 454 scaffolds. Obtained hits on scaffolds 00806 and 01273, with e-values of 3e-74 and 5.5, respectively.

42

221

272

342

220

277

390

364

Scaffold 00806

340

29116

28583

28451

28206

27994

28278

26598

26672

26333

26413

-1

-2

-3

-3

-1

0

390

**Fig. 1.** EC MoaC is 390 letter query from Arabidopsis thaliana that was blasted against Vaccinium corymbosum, and matches were found on scaffold 00806. Letters above the box represent query numbers, and letters below represent subject numbers. Reading frame values are depicted inside the boxes.

**Mob\_synth\_C found in Scaffold 00806 (query sequence starts at base 29116 on scaffold)**

1)

For Primer TGGGAGCATCTTCCAATAACTT

Rev Primer ATTAAGGAAAAATCGGTGGAGG

repeats (ac) x 13 PCR product = 260 bp & start at base 29266

2)

For Primer ACCACCACAGAGCAACACATAC

Rev Primer GAATACCGCAAATGAGAGAAGC

repeats (ga) x 12 PCR product = 216 bp & start at base 66

3)

For Primer CCTGAAGTAGCTCTTCTCCCAA

Rev Primer AGAGAAACAAAGGGCAAGAGTG

repeats (tc) x 12 PCR product = 186 bp & start at base 88878

**Phosphoribosylglycinamide formyltransferase [EC: 2.1.2.2]**

-Went to Kegg Pathway, chose Arabidopsis thaliana, and chose gene 2.1.2.2. Took AA of result and blasted sequence (292 letter query) against Vaccinium corymbosum 454 scaffolds. Obtained hits on scaffolds 02071 and 00111, with e-values of 1e-23 and 2e-10, respectively.

154

213

206

259

Scaffold 02071

4040

4219

5768

28278

+2

+2

0

292

1

114

454

83

+2

291

255

6025

+1

117

2895

154

3005

Scaffold 00111

213

255

329886

330014

256

286

330434

330526

+3

+2

154

170

328372

328422

+1

6135

+3

**Fig. 2.** EC 2.1.2.2 is 292 letter query from Arabidopsis thaliana that was blasted against Vaccinium corymbosum, and matches were found on scaffolds 02071 and 00111. Letters above the box represent query numbers, and letters below represent subject numbers. Reading frame values are depicted inside the boxes.

**2.1.2.2 found in Scaffold 02071 (query sequence starts at base 83 on scaffold)**

1)

For Primer AAATCCACTGAAAACTGCACCT

Rev Primer TTGGATAACTAGCTGTGCTGGA

repeats (ag) x 13 PCR product = 286 bp & start at base 8427

2)

For Primer TGCACAAACCTAAAACTGTTGG

Rev Primer CCACCGCTGATCAATACATAAA

repeats (ta) x 8 PCR product = 145 bp & start at base 15178

3)

For Primer TGAGAAGACATTTTTCACCCCT

Rev Primer TGGGCCATTCATATTAGTGTTG

repeats (tc) x 8 PCR product = 170 bp & start at base 35423

**2.1.2.2 found in Scaffold 00111 (query sequence starts at base 328372 on scaffold)**

1)

For Primer CCCATCCCATCACTTTCTTATT

Rev Primer ACCAGATAACTCCAGTGGCTGT

repeats (tc) x 15 PCR product = 245 bp & start at base 317973

2)

For Primer CCCATCCCATCACTTTCTTATT

Rev Primer ACCAGATAACTCCAGTGGCTGT

repeats (ac) x 11 PCR product = 245 bp & start at base 318003

3)

For Primer TGCGTCGTTACTTTTTATGTCG

Rev Primer CCTACAGTTTTATGCCCTTTGC

repeats (tc) x 11 PCR product = 274 bp & start at base 396901