

|            |                          | Dembek et al. (2015) |               |
|------------|--------------------------|----------------------|---------------|
|            |                          | Essential            | Non-essential |
| Prediction | iCdR703<br>(str. R20291) |                      |               |
|            | Essential                | 45 (78.95%)          | 12 (21.05%)   |
|            | Non-essential            | 64 (9.95%)           | 579 (90.05%)  |

**Accuracy: 89.1%**

|            |                       | str. R20291 homologs |               |
|------------|-----------------------|----------------------|---------------|
|            |                       | Essential            | Non-essential |
| Prediction | iCdG709<br>(str. 630) |                      |               |
|            | Essential             | 44 (78.57%)          | 12 (21.43%)   |
|            | Non-essential         | 64 (10.14%)          | 567 (89.86%)  |

**Accuracy: 88.9%**

|            |                          | Scaria et al. (2014) |                |
|------------|--------------------------|----------------------|----------------|
|            |                          | Enhances             | No Enhancement |
| Prediction | iCdR703<br>(str. R20291) |                      |                |
|            | Enhances                 | 78 (95.12%)          | 4 (4.88%)      |
|            | No Enhancement           | 32 (29.09%)          | 1 (3.03%)      |

**Accuracy: 68.7%**

|            |                       | Scaria et al. (2014) |                |
|------------|-----------------------|----------------------|----------------|
|            |                       | Enhances             | No Enhancement |
| Prediction | iCdG709<br>(str. 630) |                      |                |
|            | Enhances              | 76 (92.68%)          | 6 (7.32%)      |
|            | No Enhancement        | 32 (29.63%)          | 1 (3.03%)      |

**Accuracy: 66.96%**

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|                   | Experimental     |                    |                    | Prediction            |                          |             |
|-------------------|------------------|--------------------|--------------------|-----------------------|--------------------------|-------------|
|                   | Haslam<br>(1986) | Karasawa<br>(1995) | Karlsson<br>(1999) | iCdG709<br>(str. 630) | iCdR703 (str.<br>R20291) |             |
| L-Tryptophan      |                  |                    |                    |                       |                          | Amino Acids |
| L-Methionine      |                  |                    |                    |                       |                          |             |
| L-Isoleucine      |                  |                    |                    |                       |                          |             |
| D-Proline         |                  |                    |                    |                       |                          |             |
| L-Valine          |                  |                    |                    |                       |                          |             |
| L-Leucine         |                  |                    |                    |                       |                          |             |
| L-Cysteine        |                  |                    |                    |                       |                          |             |
| Biotin (B7)       |                  |                    |                    |                       |                          | Vitamins    |
| Pyridoxine (B6)   |                  |                    |                    |                       |                          |             |
| Pantothenate (B5) |                  |                    |                    |                       |                          |             |
| Na+               |                  |                    |                    |                       |                          | Minerals    |
| Fe2+              |                  |                    |                    |                       |                          |             |
| Mg                |                  |                    |                    |                       |                          |             |
| K+                |                  |                    |                    |                       |                          |             |
| Co2+              |                  |                    |                    |                       |                          |             |
| Cl-               |                  |                    |                    |                       |                          |             |
| Mn2+              |                  |                    |                    |                       |                          |             |
| Ca2+              |                  |                    |                    |                       |                          |             |
| Essential         |                  |                    | Non-Essential      |                       |                          |             |