|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Table S9-1. Predicted miRNAs regulating CNTN1. | | | | |  |  |  |
| miRNA | Position in the UTR | seed match | context++ score | context++ score percentile | weighted context++ score | conserved branch length | Pct |
| Conserved sites | |  |  |  |  |  |  |
| hsa-miR-506-3p | 233-239 | 7mer-m8 | -0.27 | 92 | -0.26 | 4.847 | 0.83 |
| hsa-miR-124-3p.2 | 233-239 | 7mer-m8 | -0.33 | 92 | -0.32 | 4.847 | 0.83 |
| hsa-miR-124-3p.1 | 233-239 | 7mer-1A | -0.18 | 88 | -0.17 | 4.847 | 0.83 |
| hsa-miR-200a-3p | 298-304 | 7mer-m8 | -0.11 | 83 | -0.1 | 3.962 | 0.43 |
| hsa-miR-141-3p | 298-304 | 7mer-m8 | -0.11 | 82 | -0.1 | 3.962 | 0.43 |
| hsa-miR-6835-3p | 354-361 | 8mer | -0.14 | 94 | -0.13 | 2.545 | N/A |
| hsa-miR-218-5p | 1400-1406 | 7mer-1A | -0.16 | 83 | -0.15 | 3.931 | 0.65 |
| hsa-miR-182-5p | 1883-1890 | 8mer | -0.3 | 95 | -0.21 | 3.215 | 0.54 |
| hsa-miR-142-5p | 2172-2179 | 8mer | -0.16 | 96 | -0.1 | 2.134 | < 0.1 |
| hsa-miR-5590-3p | 2172-2179 | 8mer | -0.15 | 95 | -0.09 | 2.134 | < 0.1 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Table S9-2. Predicted miRNAs regulating CNTN1. | | | | |  |
| Target Detail | Target Rank | Target Score | miRNA Name | Gene Symbol | Gene Description |
| Details | 1 | 100 | hsa-miR-5002-5p | CNTN1 | contactin 1 |
| Details | 2 | 100 | hsa-miR-4795-3p | CNTN1 | contactin 1 |
| Details | 3 | 99 | hsa-miR-16-1-3p | CNTN1 | contactin 1 |
| Details | 4 | 99 | hsa-miR-559 | CNTN1 | contactin 1 |
| Details | 5 | 99 | hsa-miR-4422 | CNTN1 | contactin 1 |
| Details | 6 | 99 | hsa-miR-1252-5p | CNTN1 | contactin 1 |
| Details | 7 | 99 | hsa-miR-3671 | CNTN1 | contactin 1 |
| Details | 8 | 99 | hsa-miR-126-5p | CNTN1 | contactin 1 |
| Details | 9 | 99 | hsa-miR-6835-3p | CNTN1 | contactin 1 |
| Details | 10 | 99 | hsa-miR-561-3p | CNTN1 | contactin 1 |
| Details | 11 | 98 | hsa-miR-548j-5p | CNTN1 | contactin 1 |
| Details | 12 | 98 | hsa-miR-335-3p | CNTN1 | contactin 1 |
| Details | 13 | 98 | hsa-miR-548c-5p | CNTN1 | contactin 1 |
| Details | 14 | 98 | hsa-miR-548c-3p | CNTN1 | contactin 1 |
| Details | 15 | 98 | hsa-miR-548b-5p | CNTN1 | contactin 1 |
| Details | 16 | 98 | hsa-miR-548ad-5p | CNTN1 | contactin 1 |
| Details | 17 | 98 | hsa-miR-548d-5p | CNTN1 | contactin 1 |
| Details | 18 | 98 | hsa-miR-548h-5p | CNTN1 | contactin 1 |
| Details | 19 | 98 | hsa-miR-3617-5p | CNTN1 | contactin 1 |
| Details | 20 | 98 | hsa-miR-548a-5p | CNTN1 | contactin 1 |
| Details | 21 | 98 | hsa-miR-548i | CNTN1 | contactin 1 |
| Details | 22 | 98 | hsa-miR-548as-5p | CNTN1 | contactin 1 |
| Details | 23 | 98 | hsa-miR-548w | CNTN1 | contactin 1 |
| Details | 24 | 98 | hsa-miR-548ab | CNTN1 | contactin 1 |
| Details | 25 | 98 | hsa-miR-641 | CNTN1 | contactin 1 |
| Details | 26 | 98 | hsa-miR-548ay-5p | CNTN1 | contactin 1 |
| Details | 27 | 98 | hsa-miR-548o-5p | CNTN1 | contactin 1 |
| Details | 28 | 98 | hsa-miR-548ap-5p | CNTN1 | contactin 1 |
| Details | 29 | 98 | hsa-miR-548ar-5p | CNTN1 | contactin 1 |
| Details | 30 | 98 | hsa-miR-548au-5p | CNTN1 | contactin 1 |
| Details | 31 | 98 | hsa-miR-548y | CNTN1 | contactin 1 |
| Details | 32 | 98 | hsa-miR-548ae-5p | CNTN1 | contactin 1 |
| Details | 33 | 98 | hsa-miR-548am-5p | CNTN1 | contactin 1 |
| Details | 34 | 98 | hsa-miR-548aq-5p | CNTN1 | contactin 1 |
| Details | 35 | 98 | hsa-miR-548ak | CNTN1 | contactin 1 |
| Details | 36 | 98 | hsa-miR-548bb-5p | CNTN1 | contactin 1 |
| Details | 37 | 98 | hsa-miR-548l | CNTN1 | contactin 1 |
| Details | 38 | 97 | hsa-miR-548x-5p | CNTN1 | contactin 1 |
| Details | 39 | 97 | hsa-miR-548f-5p | CNTN1 | contactin 1 |
| Details | 40 | 97 | hsa-miR-548g-5p | CNTN1 | contactin 1 |
| Details | 41 | 97 | hsa-miR-548aj-5p | CNTN1 | contactin 1 |
| Details | 42 | 96 | hsa-miR-374a-3p | CNTN1 | contactin 1 |
| Details | 43 | 96 | hsa-miR-551b-5p | CNTN1 | contactin 1 |
| Details | 44 | 96 | hsa-miR-6804-3p | CNTN1 | contactin 1 |
| Details | 45 | 96 | hsa-miR-548ar-3p | CNTN1 | contactin 1 |
| Details | 46 | 95 | hsa-miR-182-5p | CNTN1 | contactin 1 |
| Details | 47 | 95 | hsa-miR-3910 | CNTN1 | contactin 1 |
| Details | 48 | 95 | hsa-miR-1305 | CNTN1 | contactin 1 |
| Details | 49 | 95 | hsa-miR-217-3p | CNTN1 | contactin 1 |
| Details | 50 | 94 | hsa-miR-520d-5p | CNTN1 | contactin 1 |
| Details | 51 | 94 | hsa-miR-524-5p | CNTN1 | contactin 1 |
| Details | 52 | 94 | hsa-miR-548az-3p | CNTN1 | contactin 1 |
| Details | 53 | 93 | hsa-miR-4424 | CNTN1 | contactin 1 |
| Details | 54 | 93 | hsa-miR-548e-3p | CNTN1 | contactin 1 |
| Details | 55 | 93 | hsa-miR-378g | CNTN1 | contactin 1 |
| Details | 56 | 93 | hsa-miR-6864-3p | CNTN1 | contactin 1 |
| Details | 57 | 93 | hsa-miR-548a-3p | CNTN1 | contactin 1 |
| Details | 58 | 93 | hsa-miR-3672 | CNTN1 | contactin 1 |
| Details | 59 | 93 | hsa-miR-548bc | CNTN1 | contactin 1 |
| Details | 60 | 93 | hsa-miR-607 | CNTN1 | contactin 1 |
| Details | 61 | 93 | hsa-miR-548f-3p | CNTN1 | contactin 1 |
| Details | 62 | 92 | hsa-miR-6858-3p | CNTN1 | contactin 1 |
| Details | 63 | 92 | hsa-miR-8068 | CNTN1 | contactin 1 |
| Details | 64 | 92 | hsa-miR-4433b-5p | CNTN1 | contactin 1 |
| Details | 65 | 91 | hsa-miR-5590-3p | CNTN1 | contactin 1 |
| Details | 66 | 91 | hsa-miR-548n | CNTN1 | contactin 1 |
| Details | 67 | 91 | hsa-miR-124-3p | CNTN1 | contactin 1 |
| Details | 68 | 91 | hsa-miR-142-5p | CNTN1 | contactin 1 |
| Details | 69 | 91 | hsa-miR-1468-3p | CNTN1 | contactin 1 |
| Details | 70 | 91 | hsa-miR-498-3p | CNTN1 | contactin 1 |
| Details | 71 | 91 | hsa-miR-3159 | CNTN1 | contactin 1 |
| Details | 72 | 91 | hsa-miR-95-5p | CNTN1 | contactin 1 |
| Details | 73 | 91 | hsa-miR-6773-3p | CNTN1 | contactin 1 |
| Details | 74 | 91 | hsa-miR-506-3p | CNTN1 | contactin 1 |
| Details | 75 | 91 | hsa-miR-4729 | CNTN1 | contactin 1 |
| Details | 76 | 90 | hsa-let-7a-3p | CNTN1 | contactin 1 |
| Details | 77 | 90 | hsa-miR-98-3p | CNTN1 | contactin 1 |
| Details | 78 | 90 | hsa-miR-361-5p | CNTN1 | contactin 1 |
| Details | 79 | 90 | hsa-miR-548k | CNTN1 | contactin 1 |
| Details | 80 | 90 | hsa-miR-3714 | CNTN1 | contactin 1 |
| Details | 81 | 90 | hsa-miR-5684 | CNTN1 | contactin 1 |
| Details | 82 | 90 | hsa-miR-548av-5p | CNTN1 | contactin 1 |
| Details | 83 | 90 | hsa-let-7b-3p | CNTN1 | contactin 1 |
| Details | 84 | 90 | hsa-let-7f-1-3p | CNTN1 | contactin 1 |
| Details | 85 | 89 | hsa-miR-8054 | CNTN1 | contactin 1 |
| Details | 86 | 89 | hsa-miR-3662 | CNTN1 | contactin 1 |
| Details | 87 | 89 | hsa-miR-5585-3p | CNTN1 | contactin 1 |
| Details | 88 | 89 | hsa-miR-3145-3p | CNTN1 | contactin 1 |
| Details | 89 | 89 | hsa-let-7a-2-3p | CNTN1 | contactin 1 |
| Details | 90 | 89 | hsa-let-7g-3p | CNTN1 | contactin 1 |
| Details | 91 | 89 | hsa-miR-513b-5p | CNTN1 | contactin 1 |
| Details | 92 | 88 | hsa-miR-5579-5p | CNTN1 | contactin 1 |
| Details | 93 | 88 | hsa-miR-3675-3p | CNTN1 | contactin 1 |
| Details | 94 | 87 | hsa-miR-96-5p | CNTN1 | contactin 1 |
| Details | 95 | 87 | hsa-miR-4303 | CNTN1 | contactin 1 |
| Details | 96 | 87 | hsa-miR-141-3p | CNTN1 | contactin 1 |
| Details | 97 | 87 | hsa-miR-8067 | CNTN1 | contactin 1 |
| Details | 98 | 87 | hsa-miR-200a-3p | CNTN1 | contactin 1 |
| Details | 99 | 87 | hsa-miR-6508-5p | CNTN1 | contactin 1 |
| Details | 100 | 87 | hsa-miR-4646-3p | CNTN1 | contactin 1 |
| Details | 101 | 87 | hsa-miR-548aw | CNTN1 | contactin 1 |
| Details | 102 | 86 | hsa-miR-1272 | CNTN1 | contactin 1 |
| Details | 103 | 86 | hsa-miR-6885-3p | CNTN1 | contactin 1 |
| Details | 104 | 86 | hsa-miR-200c-3p | CNTN1 | contactin 1 |
| Details | 105 | 86 | hsa-miR-429 | CNTN1 | contactin 1 |
| Details | 106 | 86 | hsa-miR-200b-3p | CNTN1 | contactin 1 |
| Details | 107 | 85 | hsa-miR-5094 | CNTN1 | contactin 1 |
| Details | 108 | 85 | hsa-miR-12122 | CNTN1 | contactin 1 |
| Details | 109 | 84 | hsa-miR-4799-5p | CNTN1 | contactin 1 |
| Details | 110 | 84 | hsa-miR-6856-3p | CNTN1 | contactin 1 |
| Details | 111 | 84 | hsa-miR-12133 | CNTN1 | contactin 1 |
| Details | 112 | 84 | hsa-miR-1271-5p | CNTN1 | contactin 1 |
| Details | 113 | 84 | hsa-miR-12124 | CNTN1 | contactin 1 |
| Details | 114 | 83 | hsa-miR-4789-5p | CNTN1 | contactin 1 |
| Details | 115 | 83 | hsa-miR-5582-3p | CNTN1 | contactin 1 |
| Details | 116 | 83 | hsa-miR-7856-5p | CNTN1 | contactin 1 |
| Details | 117 | 83 | hsa-miR-3144-3p | CNTN1 | contactin 1 |
| Details | 118 | 82 | hsa-miR-4264 | CNTN1 | contactin 1 |
| Details | 119 | 82 | hsa-miR-556-3p | CNTN1 | contactin 1 |
| Details | 120 | 82 | hsa-miR-4533 | CNTN1 | contactin 1 |
| Details | 121 | 82 | hsa-miR-6830-3p | CNTN1 | contactin 1 |
| Details | 122 | 82 | hsa-miR-8063 | CNTN1 | contactin 1 |
| Details | 123 | 81 | hsa-miR-374a-5p | CNTN1 | contactin 1 |
| Details | 124 | 81 | hsa-miR-3163 | CNTN1 | contactin 1 |
| Details | 125 | 81 | hsa-miR-548at-5p | CNTN1 | contactin 1 |
| Details | 126 | 81 | hsa-miR-9-3p | CNTN1 | contactin 1 |
| Details | 127 | 81 | hsa-miR-570-3p | CNTN1 | contactin 1 |
| Details | 128 | 81 | hsa-miR-374b-5p | CNTN1 | contactin 1 |
| Details | 129 | 80 | hsa-miR-891b | CNTN1 | contactin 1 |
| Details | 130 | 80 | hsa-miR-6764-5p | CNTN1 | contactin 1 |
| Details | 131 | 80 | hsa-miR-340-5p | CNTN1 | contactin 1 |
| Details | 132 | 80 | hsa-miR-5003-5p | CNTN1 | contactin 1 |