# Supplementary Data

A


Log Likelihood Ratio: 27 Information Content: 13.4 Relative Entropy: 13 Bayes Threshold: 3.45943

| Name | Start | p-value | Sites |
|---|---|---|---|
| 3. ASO2 | 12 | 3.88e-5 | CCGGCCTCGG AAGCUCUCU |
| 1. 196861965-C2 | 3 | 3.88e-5 | GC AGUCUCCAU GTCCCAGGC |
| 2. 195513083-E10 | 10 | 7.24e-5 | GAUGGTTCC AGUCCCUCU UC |

B


Log Likelihood Ratio: 33 Information Content: 10.1 Relative Entropy: 9.5 Bayes Threshold: 5.25873

| Name | Start | p-value | Sites |
|---|---|---|---|
| 3. P2-F2 | 4 | 2.97e-4 | AGC AGUCUC CATGTCCCAG |
| 1. P2-C2 | 3 | 2.97e-4 | GC AGUCUC CATGTCCCAG |
| 7. P2-E8 | 2 | 6.29e-4 | G GGUCUC CTCCACACCC |
| 2. P2-E10 | 10 | 1.03e-3 | GAUGGTTCC AGUCCC UCUUC |
| 10. P2-F9 | 1 | 1.48e-3 | GGUCCC ATCCCTTCTG |

C


Log Likelihood Ratio: 31 Information Content: 10.4 Relative Entropy: 11.1 Bayes Threshold: 6.08215

| Name | Strand | Start | p-value | Sites |
|---|---|---|---|---|
| 11. ASO2 | + | 4 | 1.47e-4 | TCC GGCCTC GGAAGCTCTC |
| 8. P2-C4 | + | 11 | 1.47e-4 | CCATGTCCCA GGCCTC CAGT |
| 4. P2-C11 | + | 3 | 2.51e-4 | TT GGCCTG TGGATGCTTT |
| 7. P2-A11 | + | 11 | 4.58e-4 | AAATGTCCTG GCCCTC ACTG |

D


Log Likelihood Ratio: 55 Information Content: 16.7 Relative Entropy: 16 Bayes Threshold: 3.44518

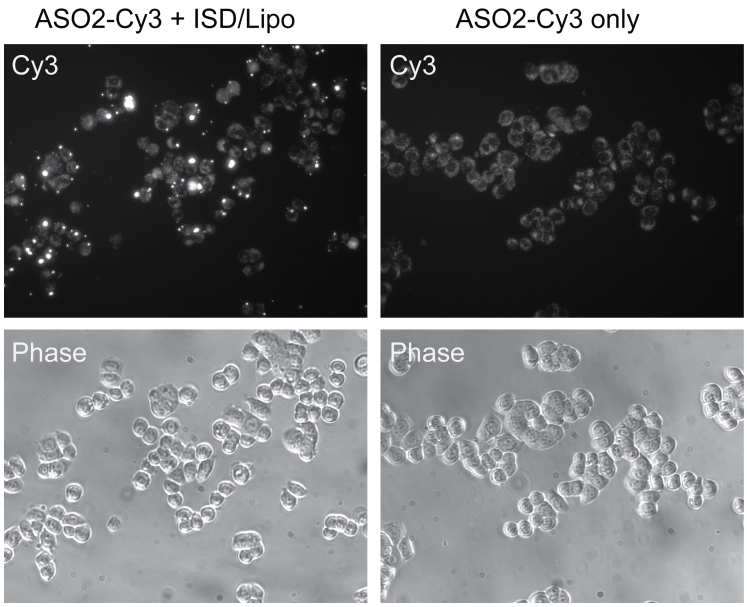
| Name | Strand | Start | p-value | Sites |
|---|---|---|---|---|
| 6. P2-A6 | + | 4 | 3.25e-7 | GAT TAAAACAGATTAA TACA |
| 1. P2-C6 | + | 5 | 3.25e-7 | GGAT TAAAACAGATTAA TAC |
| 3. P2-E6 | + | 4 | 7.92e-6 | CTT GTGAAAAGATTAT CTTC |
| 5. P2-C5 | + | 3 | 1.10e-5 | CC TAGAAAGAAGCAA AGATT |
| 10. P2-D6 | + | 3 | 1.53e-5 | AA TTTAAAGCATGAA TATTA |

E

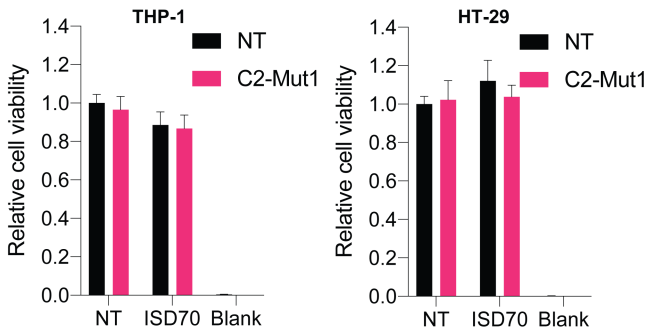

Log Likelihood Ratio: 50 Information Content: 11.2 Relative Entropy: 9 Bayes Threshold: 5.7039

| Name | Start | p-value | Sites |
|---|---|---|---|
| 12. P2-D10 | 4 | 1.17e-3 | CAC CCUUCU CTCTGGUCCC |
| 8. P2-A8 | 1 | 1.17e-3 | CCUUCU CTCTGGTCCC |
| 6. P2-A9 | 15 | 1.17e-3 | UGGTCCCATC CCUUCU |
| 4. P2-A3 | 15 | 1.17e-3 | CTGCTGCCCA CCUUCU |
| 2. P2-H9 | 9 | 1.17e-3 | GUCCCATC CCUUCU GCUGCC |
| 1. P2-H8 | 14 | 1.17e-3 | UCCTCCACAC CCUUCU C |
| 11. P2-H2 | 14 | 2.11e-3 | GCCTCCAGTG UCUUCU C |
| 9. P2-G7 | 8 | 2.11e-3 | UCCCAAC UCUUCU AACUCGU |

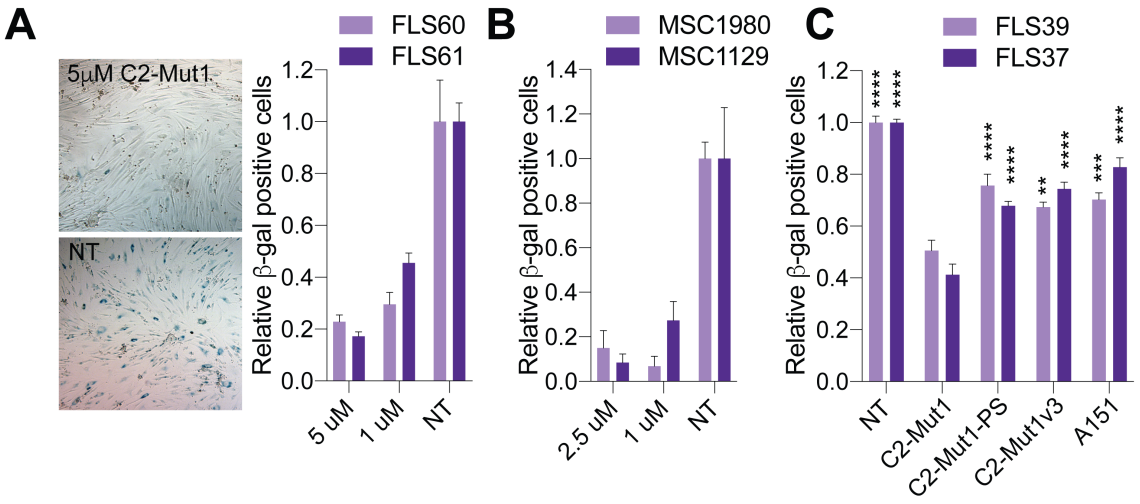
**Supplementary Figure S1.** Multiple Em for Motif Elicitation (MEME) motif discovery in ASOs. (A) The two most potent cGAS inhibitors in our 80 ASOs screen, including ASO2 (i.e. ASO2, C2 and E10) were analysed with MEME. (B) The 10 most potent cGAS inhibitors in our 80 ASOs screen were analysed with MEME (see Supplementary Table S2). Five sequences were identified with the motif shown (noting that C2 and F2 are closely related sequences, but the other ones were not). (C, D) The 10 most potent TLR9 inhibitors in our 80 ASOs screen were analysed with MEME (see Supplementary Table S2), along ASO2. Two motifs are shown here, including one common with ASO2 (C), and an A-rich central motif (D). (E) MEME analysis of 17 ASOs with less than 10% inhibition of cGAS sensing in our 80 ASOs screen (see Supplementary Table S2). Eight ASOs shared the highlighted motif (noting that D10/A8 and A9/H9 are related sequences, respectively). (A-E) The figures are direct screenshots from the MEME website. The ASO names are provided as per their reference position in the plate (see Supplementary Table S2).



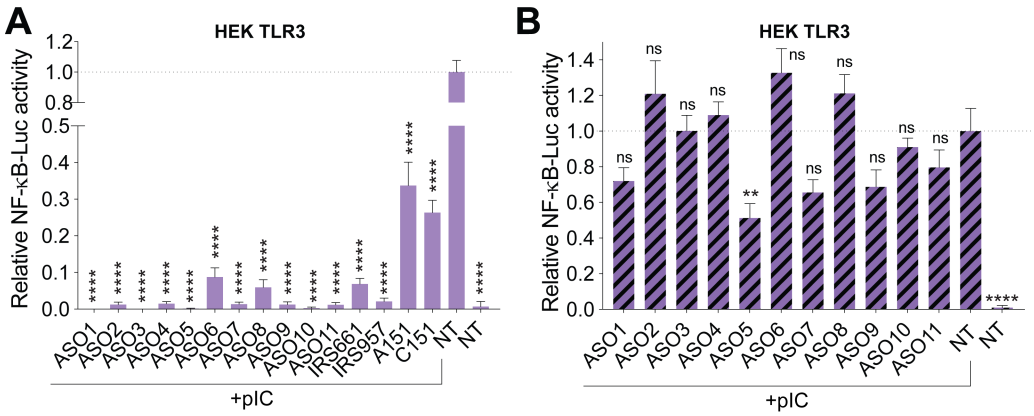

**Supplementary Figure S2.**
HT-29 cells were incubated overnight with 500 nM ASO2-Cy3, prior to ISD70+lipofectamine transfection or not, for 4 h. The cells were subsequently washed with PBS prior to imaging by inverted fluorescent microscopy. The images shown are representative of two independent experiments. While cytosolic fluorescence in ASO2-Cy3 only treated cells clearly confirmed spontaneous uptake of the ASOs by the cells, the occurrence of bright fluorescent puncta suggests an increased uptake of the labelled ASOs during the transfection of the lipofectamine-ISD complexes.



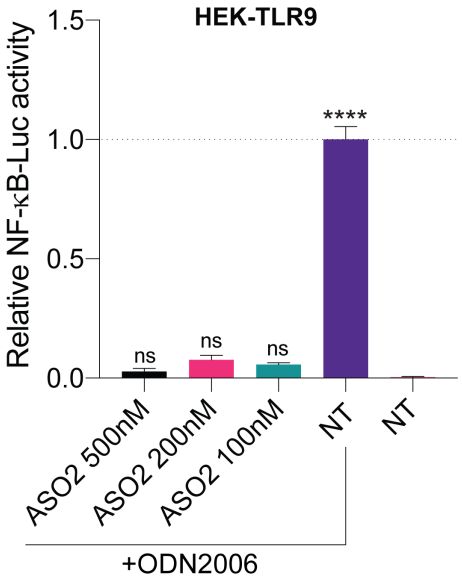

**Supplementary Figure S3.**
THP-1 and HT-29 cells were incubated for 6 h with 100 nM or 187.5 nM C2-Mut1, respectively, prior to overnight transfection or not with ISD70. The next day, 1X resazurin solution was added to each well, and cell viability was measured after 4-5 h at 37°C. Data were normalised to the NT condition (no ASO, no ISD70), after background correction with blank condition. Data shown are averaged from two independent experiments in biological triplicate (± s.e.m).




**Supplementary Figure S4.** (A) Primary FLS cells from two RA patients were cultivated for 15 days in the presence of indicated doses of naked ASOs, prior to being fixed and analysed for β-galactosidase staining. The numbers of β-galactosidase positive cells were normalised to the NT condition. Left panel: representative images of NT and 5 μM C2-Mut1 conditions; 40-50% of the cells in NT conditions were positive for β-galactosidase staining. Data shown are averaged from three replicates for each condition (± s.e.m), for each independent donor. (B) Primary bone marrow-derived MSCs from two different patients were cultivated for 2 weeks in the presence of indicated doses of naked C2-Mut1, prior to being fixed and analysed for β-galactosidase staining. The numbers of β-galactosidase positive cells were normalised to the NT condition. Data shown are averaged from six replicates for each condition (± s.e.m), for each independent donor. (C) Primary FLS cells from two control patients were cultivated for 7 days in the presence of 2.5 μM naked ASOs, prior to being fixed and analysed for β-galactosidase staining. The numbers of β-galactosidase positive cells were normalised to the NT condition. Data shown are averaged from at least five replicates for each condition (± s.e.m), for each independent donor. Ordinary two-way ANOVA with Sidak's multiple comparison tests relative to the "C2-Mut1 only" condition of each donor are shown.




**Supplementary Figure S5.** HEK-TLR3 cells expressing a NF-κB-luciferase reporter were treated with 500 nM (A) or 100 nM (B) indicated ASOs/ODNs for 20-50 min prior to stimulation or not (non-treated [NT]) with poly(I:C) (at 1 μg/ml [A] or 0.5 μg/ml [B]). NF-κB-luciferase levels were measured after overnight incubation and were normalised to the "pIC only" condition, after background correction with NT condition. (A, B) Data are averaged from two independent experiments in biological triplicate (± s.e.m and one-way ANOVA with Dunnett's multiple comparison tests to the condition "pIC" are shown). ** P≤0.01, **** $P \leq 0.0001$. ns: non-significant.




**Supplementary Figure S6.** Inhibition of TLR9 sensing by ASO2 is preserved with decreasing amounts of ASO2. HEK-TLR9 cells expressing a NF-κB-luciferase reporter were treated with indicated amount of ASO2 (100-500 nM) for 50 min prior to stimulation or not (non-treated [NT]) with 200 nM ODN2006. NF-κB-luciferase levels were measured after overnight incubation. NF-κB-luciferase levels were normalised to "ODN2006 only" condition, after background correction with the NT condition. Data shown are averaged from two independent experiments in biological triplicate (± s.e.m and one-way ANOVA with Dunnett's multiple comparison tests to the condition "NT" are shown). **** $P \leq 0.0001$. ns: non-significant.

**Supplementary Table S1.** Various oligonucleotides used in this study (all in 5'-3'). UPPERCASE alone for DNA, 'm' indicates 2'OMe base, and * denotes the phosphorothioate backbone.

| Name | Sequence |
|---|---|
| [cGAS]**ASO1**-146 | mA*mU*mG*mG*mC*C*T*T*T*C*C*G*T*G*C*mC*mA*mA*mG*mG |
| [cGAS]**ASO2**-168 | mU*mC*mC*mG*mG*C*C*T*C*G*G*A*A*G*C*mU*mC*mU*mC*mU |
| [cGAS]**ASO3**-200 | mG*mC*mA*mU*mU*C*C*G*T*G*C*G*G*A*A*mG*mC*mC*mU*mU |
| [cGAS]**ASO4**-277 | mG*mG*mC*mC*mG*A*A*C*T*T*T*C*C*C*G*mC*mC*mU*mU*mA |
| [cGAS]**ASO5**-521 | mG*mG*mU*mC*mU*T*G*G*C*T*T*C*G*T*G*mG*mA*mG*mC*mA |
| [cGAS]**ASO6**-616 | mG*mG*mA*mG*mC*T*T*C*G*A*G*G*C*C*C*mC*mA*mG*mG*mC |
| [cGAS]**ASO7**-697 | mG*mG*mU*mG*mG*T*C*C*A*C*A*A*C*C*C*mC*mU*mU*mU*mC |
| [cGAS]**ASO8**-793 | mC*mA*mU*mU*mA*G*G*T*G*C*A*G*A*A*A*mU*mC*mU*mU*mC |
| [cGAS]**ASO9**-829 | mU*mU*mC*mU*mG*G*G*G*A*C*T*T*C*C*A*mG*mU*mU*mU*mA |
| [cGAS]**ASO10**-1098 | mU*mG*mA*mU*mU*C*C*A*A*A*G*C*C*A*G*mG*mG*mU*mU*mA |
| [cGAS]**ASO11**-1185 | mC*mU*mU*mU*mA*G*T*C*G*T*A*G*T*T*G*mC*mU*mU*mC*mC |
| ASO11Mut1 | mC*mU*mU*mU*mA*G*T*C*G*T*A*G*T*T*G*mU*mC*mU*mC*mU |
| ASO11Mut2 | mU*mC*mC*mG*mG*G*T*C*G*T*A*G*T*T*G*mC*mU*mU*mC*mC |
| ASO2up | mU*mC*mC*mG*mG*C*C*T*C*G*G*A*G*T*C*mU*mC*mC*mA*mU |
| ASO2down | mU*mC*mC*mG*mG*C*C*T*C*G*G*C*A*G*A*mU*mA*mU*mC*mG |
| ASO2-Mut1 | mU*mC*mC*mG*mG*C*C*T*C*G*G*G*A*G*A*mU*mC*mU*mC*mU |
| C2 | mG*mC*mA*mG*mU*C*T*C*C*A*T*G*T*C*C*mC*mA*mG*mG*mC |
| C2-Mut1 | mG*mC*mG*mG*mU*A*T*C*C*A*T*G*T*C*C*mC*mA*mG*mG*mC |
| C2-Mut2 | mG*mC*mG*mG*mU*A*T*A*C*A*G*G*T*C*C*mC*mA*mG*mG*mC |
| C2-Mut1v1 | mG*mC*mU*mG*mU*T*T*C*C*A*T*G*T*C*C*mC*mA*mG*mG*mC |
| C2-Mut1v2 | mG*mC*mU*mG*mU*G*T*C*C*A*T*G*T*C*C*mC*mA*mG*mG*mC |
| C2-Mut1v3 | mG*mC*mC*mG*mU*T*T*C*C*A*T*G*T*C*C*mC*mA*mG*mG*mC |
| C2-Mut1v4 | mG*mC*mC*mG*mU*G*T*C*C*A*T*G*T*C*C*mC*mA*mG*mG*mC |
| C2-ASO2-A | mG*mC*mG*mG*mU*A*T*C*C*A*T*A*G*T*C*mU*mC*mC*mA*mU |
| C2-ASO2-B | mG*mC*mG*mG*mU*A*T*C*C*A*T*C*A*G*A*mU*mA*mU*mC*mG |
| C2-Mut1-PS | G*C*G*G*T*A*T*C*C*A*T*G*T*C*C*C*A*G*G*C |
| [C2]Mut1-dC | mG*mG*mU*A*T*C*C*C*C*C*C*C*C*C*C*C*C*C*C*C |
| [C2]Mut1-v3-dC | mC*mG*mU*T*T*C*C*C*C*C*C*C*C*C*C*C*C*C*C*C |
| dC20 | C*C*C*C*C*C*C*C*C*C*C*C*C*C*C*C*C*C*C*C*C*C |
| ASO2-Cy3 | mU*mC*mC*mG*mG*C*C*T*C*G*G*A*A*G*C*mU*mC*mU*mC*mU/3Cy3Sp/ |
| A151 | T*T*A* G*G*G* T*T*A* G*G*G* T*T*A* G*G*G* T*T*A* G*G*G |
| C151 | T*T*C* A*A*A* T*T*C* A*A*A* T*T*C* A*A*A* T*T*C* A*A*A |
| IRS661 | T*G*C* T*T*G* C*A*A* G*C*T* T*G*C* A*A*G* C*A |
| IRS957 | T*G*C* T*T*G* A*C*A* T*C*C* T*G*G* A*G*G* G*G*T* T*G*T |
| [HPRT]551 | mC*mU*mU*mC*mC*A*C*A*A*T*C*A*A*G*A*mC*mA*mU*mU*mC |
| [HPRT]660 | mC*mU*mU*mC*mG*T*G*G*G*G*T*C*C*T*T*mU*mU*mC*mA*mC |
| [HPRT]661 | mA*mC*mU*mU*mC*G*T*G*G*G*G*T*C*C*T*mU*mU*mU*mC*mA |
| [HPRT]662 | mC*mA*mC*mU*mU*C*G*T*G*G*G*G*T*C*C*mU*mU*mU*mU*mC |
| [HPRT]664 | mA*mA*mC*mA*mC*T*T*C*G*T*G*G*G*G*T*mC*mC*mU*mU*mU |
| [HPRT]665 | mC*mA*mA*mC*mA*C*T*T*C*G*T*G*G*G*G*mU*mC*mC*mU*mU |
| [HPRT]666 | mC*mC*mA*mA*mC*A*C*T*T*C*G*T*G*G*G*mG*mU*mC*mC*mU |
| ODN 2006 | T*C*G* T*C*G* T*T*T* T*G*T* C*G*T* T*T*T* G*T*C* G*T*T |
| ODN 1826 | T*C*C* A*T*G* A*C*G* T*T*C* C*T*G* A*C*G* T*T |
| ISD45-FWD | TAC AGA TCT ACT AGT GAT CTA TGA CTG ATC TGT ACA TGA TCT ACA |
| ISD45-REV | TGT AGA TCA TGT ACA GAT CAG TCA TAG ATC ACT AGT AGA TCT GTA |
| ISD70-FWD | CCA TCA GAA AGA GGT TTA ATA TTT TTG TGA GAC CAT CGA AGA GAG AAA GAG ATA AAA CTT TTT TAC GAC T |
| ISD70-REV | AGT CGT AAA AAA GTT TTA TCT CTT TCT CTC TTC GAT GGT CTC ACA AAA ATA TTA AAC CTC TTT CTG ATG G |

**Supplementary Table S2.** Eighty ASO screen data. The targeted gene names are provided in brackets (e.g. [CDKN2B-AS1]), followed by the reference position in the target RNA. ASOs were synthesised with the following modifications: UPPERCASE alone for DNA, 'm' indicates 2'OMe base modifications, and * denotes the phosphorothioate backbone. The "Position" column denotes the reference position of the ASOs in the 96 well plate used in the screen. The concentration of the ASOs used in each screen is indicated. Averaged NF-κB-luciferase or IP-10 levels from each screen are given relative to each of the ISD70 (cGAS), ODN2006 (TLR9), R848 (TLR7/8 – Alharbi et al., *Nucleic Acids Res.* 2020) conditions, as percentages (TLR7/9/cGAS) or fold increases (TLR8). **Bold** denotes the 10 strongest cGAS inhibitors used for motif discovery in Supplementary Figure S1B. *Italic* denotes the 17 ASOs with less than 10% inhibition of the "ISD70 only" condition used for motif discovery in Supplementary Figure S1E. Underlined denotes the 10 most potent TLR9 inhibitors used for motif discovery in Supplementary Figure S1C and S1D. Blue denotes the 16 most potent TLR9 inhibitors and red the 16 weakest inhibitors of TLR9 used in Figure 4G. Yellow highlight denotes the 4 ASOs inhibiting TLR7/9 and cGAS by less than 30%.

| [Transcript Name] and Seq Name | Sequence | Position | cGAS-100nM | TLR9-500nM | TLR7-100nM | TLR8-500nM |
|---|---|---|---|---|---|---|
| [CDKN2B-AS1]132 | mU*mU*mA*mA*mA*T*A*A*T*C*T*A*G*T*T*mU*mG*mA*mA*mG | B5 | 52.20 | 98.18 | 25.66 | 6.43 |
| [CDKN2B-AS1]1415 | mG*mU*mG*mU*mC*C*T*T*C*A*T*G*C*T*T*mU*mG*mG*mA*mU | F3 | 58.18 | 98.99 | 18.05 | 1.60 |
| [CDKN2B-AS1]1519 | mA*mG*mA*mA*mA*G*A*A*G*C*A*A*A*G*A*mU*mU*mC*mA*mA | F5 | 49.09 | 68.12 | 42.99 | 2.78 |
| [CDKN2B-AS1]1522 | mC*mC*mU*mA*mG*A*A*A*G*A*A*G*C*A*A*mA*mG*mA*mU*mU | C5 | 60.90 | 42.44 | 57.20 | 4.94 |
| [CDKN2B-AS1]1528 | mG*mU*mC*mA*mA*A*C*C*T*A*G*A*A*A*G*mA*mA*mG*mC*mA | E4 | 68.94 | 68.13 | 23.64 | 1.85 |
| [CDKN2B-AS1]1773 | mG*mA*mU*mU*mA*A*A*A*C*A*G*A*T*T*A*mA*mU*mA*mC*mA | A6 | 89.36 | 44.97 | 21.92 | 1.48 |
| [CDKN2B-AS1]1774 | mG*mG*mA*mU*mU*A*A*A*A*C*A*G*A*T*T*mA*mA*mU*mA*mC | C6 | 50.11 | 27.79 | 27.16 | 1.67 |
| [CDKN2B-AS1]1775 | mA*mG*mG*mA*mU*T*A*A*A*A*C*A*G*A*T*mU*mA*mA*mU*mA | G4 | 88.54 | 63.48 | 36.28 | 2.63 |
| [CDKN2B-AS1]2130 | mA*mG*mA*mU*mU*A*T*C*T*T*C*T*T*T*T*mA*mA*mU*mU*mU | F6 | 55.80 | 78.72 | 37.10 | 6.26 |
| [CDKN2B-AS1]2131 | mA*mA*mG*mA*mU*T*A*T*C*T*T*C*T*T*T*mU*mA*mA*mU*mU | G5 | 73.50 | 59.77 | 42.09 | 5.62 |
| [CDKN2B-AS1]2132 | mA*mA*mA*mG*mA*T*T*A*T*C*T*T*C*T*T*mU*mU*mA*mA*mU | E5 | 74.59 | 63.14 | 49.28 | 5.04 |
| [CDKN2B-AS1]2133 | mA*mA*mA*mA*mG*A*T*T*A*T*C*T*T*C*T*mU*mU*mU*mA*mA | B6 | 57.68 | 80.95 | 47.41 | 4.68 |
| [CDKN2B-AS1]2134 | mG*mA*mA*mA*mA*G*A*T*T*A*T*C*T*T*C*mU*mU*mU*mU*mA | H5 | 51.49 | 61.11 | 34.44 | 1.87 |
| **[CDKN2B-AS1]2137** | **mU*mG*mU*mG*mA*A*A*A*G*A*T*T*A*T*T*C*mU*mU*mC*mU*mU** | **G6** | **40.72** | **62.16** | **34.51** | **4.97** |
| [CDKN2B-AS1]2138 | mU*mU*mG*mU*mG*A*A*A*A*G*A*T*T*A*T*mC*mU*mU*mC*mU | H6 | 69.36 | 61.15 | 35.02 | 1.94 |
| [CDKN2B-AS1]2139 | mC*mU*mU*mG*mU*G*A*A*A*A*G*A*T*T*A*mU*mC*mU*mU*mC | E6 | 33.75 | 34.91 | 85.33 | 6.02 |
| [CDKN2B-AS1]2196 | mG*mG*mU*mG*mG*C*C*A*C*A*G*G*C*A*A*mC*mG*mU*mC*mA | D4 | 48.58 | 97.04 | 39.07 | 0.98 |
| [CDKN2B-AS1]2198 | mA*mA*mG*mG*mU*G*G*C*C*A*C*A*G*G*C*mA*mA*mC*mG*mU | H3 | 60.48 | 84.28 | 57.85 | 0.78 |
| [CDKN2B-AS1]2218 | mA*mG*mG*mC*mC*T*C*C*A*G*T*G*T*C*T*mU*mC*mU*mC*mC | B3 | 62.85 | 81.24 | 44.73 | 4.66 |
| *[CDKN2B-AS1]2219* | *mC*mA*mG*mG*mC*C*T*C*C*A*G*T*G*T*C*mU*mU*mC*mU*mC* | *H2* | *99.38* | *66.99* | *54.11* | *3.89* |
| [CDKN2B-AS1]2223 | mG*mU*mC*mC*mC*A*G*G*C*C*T*C*C*A*G*mU*mG*mU*mC*mU | G3 | 74.22 | 67.61 | 19.01 | 2.17 |
| [CDKN2B-AS1]2227 | mC*mC*mA*mU*mG*T*C*C*C*A*G*G*C*C*T*mC*mC*mA*mG*mU | C4 | 36.34 | 48.79 | 41.39 | 1.46 |
| *[CDKN2B-AS1]2230* | *mU*mC*mU*mC*mC*A*T*G*T*C*C*C*A*G*G*mC*mC*mU*mC*mC* | *C3* | *94.78* | *118.93* | *43.45* | *9.17* |
| [CDKN2B-AS1]2231 | mG*mU*mC*mU*mC*C*A*T*G*T*C*C*C*A*G*mG*mC*mC*mU*mC | D2 | 84.16 | 77.80 | 23.75 | 1.25 |
| [CDKN2B-AS1]2232 | mA*mG*mU*mC*mU*C*C*A*T*G*T*C*C*C*A*mG*mG*mC*mC*mU | B2 | 88.13 | 122.20 | 35.77 | 2.28 |
| [CDKN2B-AS1]2233 | mC*mA*mG*mU*mC*T*C*C*A*T*G*T*C*C*C*mA*mG*mG*mC*mC | A2 | 75.92 | 55.13 | 47.75 | 3.81 |
| **[CDKN2B-AS1]2234** | **mG*mC*mA*mG*mU*C*T*C*C*A*T*G*T*C*C*mC*mA*mG*mG*mC** | **C2** | **10.02** | **90.04** | **20.30** | **2.25** |
| **[CDKN2B-AS1]2235** | **mA*mG*mC*mA*mG*T*C*T*C*C*A*T*G*T*C*mC*mC*mA*mG*mG** | **F2** | **28.75** | **73.18** | **25.50** | **4.93** |
| *[CDKN2B-AS1]2236* | *mA*mA*mG*mC*mA*G*T*C*T*C*C*A*T*G*T*mC*mC*mC*mA*mG* | *G2* | *107.34* | *69.71* | *35.69* | *2.62* |
| [CDKN2B-AS1]2237 | mA*mA*mA*mG*mC*A*G*T*C*T*C*C*C*A*T*G*mU*mC*mC*mC*mA | E2 | 70.95 | 87.17 | 27.16 | 3.38 |
| [CDKN2B-AS1]495 | mA*mG*mU*mG*mG*C*A*C*A*T*A*C*C*A*C*mA*mC*mC*mC*mU | B4 | 59.69 | 86.07 | 41.95 | 4.48 |
| [CDKN2B-AS1]611 | mG*mU*mG*mU*mU*T*T*T*A*A*T*T*T*T*G*mU*mA*mG*mA*mG | H4 | 66.24 | 98.50 | 23.63 | 1.88 |
| [CDKN2B-AS1]613 | mC*mA*mG*mU*mG*T*T*T*T*T*A*A*T*T*T*mU*mG*mU*mA*mG | F4 | 60.94 | 92.59 | 62.68 | 6.73 |
| [CDKN2B-AS1]626 | mA*mU*mU*mU*mC*C*A*C*A*T*G*C*C*C*A*mG*mU*mG*mU*mU | A4 | 52.58 | 63.65 | 32.05 | 4.09 |
| [CDKN2B-AS1]627 | mU*mA*mU*mU*mU*C*C*A*C*A*T*G*C*C*C*mA*mG*mU*mG*mU | E3 | 80.99 | 71.20 | 30.54 | 3.87 |
| [CDKN2B-AS1]645 | mA*mA*mU*mU*mU*A*A*A*G*C*A*T*G*A*A*mU*mA*mU*mU*mA | D6 | 67.63 | 53.26 | 46.75 | 5.02 |
| *[CDKN2B-AS1]79* | *mA*mA*mA*mA*mU*A*A*G*G*G*G*A*A*T*A*mG*mG*mG*mG*mA* | *D5* | *94.10* | *67.44* | *68.45* | *0.71* |
| *[CDKN2B-AS1]80* | *mU*mA*mA*mA*mA*T*A*A*G*G*G*G*A*A*T*mA*mG*mG*mG*mG* | *A5* | *110.58* | *64.58* | *40.95* | *1.30* |
| *[CDKN2B-AS1]831* | *mA*mU*mA*mU*mC*T*G*C*T*G*C*C*C*A*C*mC*mU*mU*mC*mU* | *A3* | *108.01* | *73.46* | *47.52* | *5.89* |
| [CDKN2B-AS1]832 | mA*mA*mU*mA*mU*C*T*G*C*T*G*C*C*C*A*mC*mC*mU*mU*mC | D3 | 83.17 | 70.72 | 43.66 | 4.45 |
| [LINC-PINT]101 | mU*mC*mC*mC*mA*T*C*C*C*T*T*C*T*G*C*mU*mG*mC*mC*mA | D9 | 86.62 | 59.80 | 43.08 | 10.88 |
| *[LINC-PINT]102* | *mG*mU*mC*mC*mC*A*T*C*C*C*T*T*C*T*G*mC*mU*mG*mC*mC* | *H9* | *113.87* | *101.22* | *22.47* | *5.07* |
| **[LINC-PINT]103** | **mG*mG*mU*mC*mC*C*A*T*C*C*C*T*T*C*T*mG*mC*mU*mG*mC** | **F9** | **45.23** | **88.75** | **20.75** | **1.87** |

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| [LINC-PINT]106 | mU*mC*mU*mG*mG*T*C*C*C*A*T*C*C*C*T*mU*mC*mU*mG*mC | B10 | 48.75 | 56.60 | 29.42 | 5.25 |
| *[LINC-PINT]108* | *mU*mC*mU*mC*mU*G*G*T*C*C*C*A*T*C*C*mC*mU*mU*mC*mU* | *A9* | *104.65* | *100.51* | *78.25* | *11.42* |
| [LINC-PINT]109 | mC*mU*mC*mU*mC*T*G*G*T*C*C*C*A*T*C*mC*mC*mU*mU*mC | B9 | 80.22 | 89.85 | 84.97 | 10.10 |
| *[LINC-PINT]110* | *mU*mC*mU*mC*mU*C*T*G*G*T*C*C*C*A*T*mC*mC*mC*mU*mU* | *G9* | *92.39* | *74.25* | *43.82* | *11.27* |
| [LINC-PINT]111 | mU*mU*mC*mU*mC*T*C*T*G*G*T*C*C*C*A*mU*mC*mC*mC*mU | E9 | 77.41 | 98.01 | 26.22 | 9.51 |
| [LINC-PINT]112 | mC*mU*mU*mC*mU*C*T*C*T*G*G*T*C*C*C*mA*mU*mC*mC*mC | B8 | 82.64 | 64.35 | 56.20 | 9.21 |
| *[LINC-PINT]113* | *mC*mC*mU*mU*mC*T*C*T*C*T*G*G*T*C*C*mC*mA*mU*mC*mC* | *A8* | *103.79* | *55.47* | *60.90* | *3.51* |
| [LINC-PINT]114 | mC*mC*mC*mU*mU*C*T*C*T*C*T*G*G*T*C*mC*mC*mA*mU*mC | C8 | 84.38 | 62.09 | 49.59 | 8.12 |
| [LINC-PINT]115 | mA*mC*mC*mC*mU*T*C*T*C*T*C*T*G*G*T*mC*mC*mC*mA*mU | G8 | 89.81 | 32.00 | 43.37 | 7.57 |
| *[LINC-PINT]116* | *mC*mA*mC*mC*mC*T*T*C*T*C*T*C*T*G*G*mU*mC*mC*mC*mA* | *D10* | *97.19* | *102.85* | *73.30* | *5.97* |
| [LINC-PINT]1222 | mU*mU*mA*mG*mC*T*C*C*T*T*G*C*C*T*C*mG*mU*mU*mC*mC | C9 | 63.80 | 78.17 | 31.67 | 8.41 |
| *[LINC-PINT]126* | *mG*mU*mC*mU*mC*C*T*C*C*A*C*A*C*C*C*mU*mU*mC*mU*mC* | *H8* | *114.36* | *77.09* | *25.01* | *7.17* |
| [LINC-PINT]127 | mG*mG*mU*mC*mU*C*C*T*C*C*C*A*C*A*C*C*mC*mU*mU*mC*mU | D8 | 76.95 | 77.91 | 23.66 | 3.72 |
| **[LINC-PINT]128** | **mG*mG*mG*mU*mC*T*C*C*T*C*C*A*C*C*A*C*mC*mC*mU*mU*mC** | **E8** | **37.83** | **94.51** | **21.47** | **1.23** |
| *[LINC-PINT]1284 KL* | *mU*mC*mC*mC*mA*A*C*T*C*T*T*C*T*A*A*mC*mU*mC*mG*mU* | *G7* | *99.64* | *86.73* | *40.79* | *13.35* |
| **[LINC-PINT]1315 KL** | **mG*mC*mA*mA*mG*G*C*A*G*A*G*A*A*A*C*mC*mU*mC*mC*mA*mG** | **H7** | **30.64** | **53.46** | **19.99** | **2.69** |
| [LINC-PINT]148 .1 | mA*mA*mA*mU*mG*T*C*C*T*G*G*C*C*C*T*mC*mA*mC*mU*mG | A11 | 66.46 | 46.72 | 46.45 | 1.56 |
| **[LINC-PINT]1497 .1** | **mG*mA*mU*mG*mG*T*T*C*C*A*G*T*C*C*C*mU*mC*mU*mU*mC** | **E10** | **26.05** | **80.47** | **22.32** | **1.01** |
| [LINC-PINT]2673 .1 | mU*mU*mG*mG*mC*C*T*G*T*G*G*A*T*G*C*mU*mU*mU*mG*mU | C11 | 68.35 | 40.71 | 21.43 | 0.94 |
| [LINC-PINT]2690 | mU*mU*mU*mG*mA*A*A*T*T*C*A*G*A*A*G*mA*mU*mU*mU*mG | H11 | 84.15 | 54.33 | 35.07 | 4.93 |
| *[LINC-PINT]2755* | *mC*mU*mU*mU*mA*T*A*T*T*A*C*A*A*A*G*mC*mU*mA*mC*mU* | *F11* | *92.54* | *84.43* | *54.83* | *6.37* |
| [LINC-PINT]283 .1 | mU*mG*mA*mU*mG*A*T*G*C*T*T*G*C*A*G*mG*mA*mG*mG*mC | G10 | 85.85 | 65.76 | 25.50 | 1.57 |
| [LINC-PINT]2990 | mC*mA*mC*mU*mG*T*A*T*T*T*T*A*T*T*A*mC*mA*mG*mA*mA | E11 | 69.47 | 117.42 | 58.13 | 4.86 |
| [LINC-PINT]384 | mU*mG*mA*mC*mA*A*A*A*C*A*A*T*A*A*T*mA*mA*mC*mA*mG | G11 | 88.79 | 53.61 | 36.68 | 2.57 |
| *[LINC-PINT]412 KL* | *mG*mU*mU*mC*mA*G*T*C*A*G*A*T*C*G*C*mU*mG*mG*mG*mA* | *A7* | *93.74* | *77.50* | *17.46* | *1.70* |
| [LINC-PINT]501 KL | mU*mG*mU*mU*mU*C*C*C*C*G*G*A*G*A*G*mC*mA*mA*mU*mG | B7 | 57.81 | 71.47 | 30.90 | 2.04 |
| [LINC-PINT]523 KL | mU*mG*mA*mC*mA*T*T*T*C*G*T*G*G*C*T*mC*mC*mU*mA*mC | C7 | 79.34 | 118.29 | 33.56 | 4.34 |
| *[LINC-PINT]524 .1* | *mA*mU*mG*mA*mC*A*T*T*T*C*G*T*G*G*C*mU*mC*mC*mU*mA* | *H10* | *99.38* | *107.12* | *32.53* | *1.20* |
| **[LINC-PINT]587 KL** | **mA*mG*mC*mC*mG*A*A*C*A*G*A*A*G*G*A*mG*mC*mG*mU*mC** | **D7** | **39.92** | **57.46** | **27.70** | **3.73** |
| [LINC-PINT]727 .1 | mG*mU*mC*mC*mG*T*A*C*C*T*C*C*A*C*C*mC*mA*mC*mC*mG | B11 | 86.09 | 58.15 | 22.79 | 3.70 |
| [LINC-PINT]83 .1 | mC*mA*mA*mG*mC*C*C*C*A*G*C*G*T*T*C*mC*mU*mC*mC*mG | F10 | 77.10 | 93.79 | 45.20 | 4.44 |
| [LINC-PINT]877 KL | mC*mC*mC*mC*mU*mA*A*T*G*C*T*T*T*C*C*T*mC*mU*mC*mC*mA | E7 | 89.09 | 86.47 | 58.39 | 8.39 |
| [LINC-PINT]935 KL | mG*mC*mG*mU*mA*G*T*T*T*C*T*C*T*T*C*mC*mU*mC*mC*mC | F7 | 50.62 | 52.04 | 27.23 | 4.12 |
| [LINC-PINT]937 .1 | mU*mG*mG*mC*mG*T*A*G*T*T*T*C*T*C*T*mU*mC*mC*mU*mC | D11 | 70.97 | 79.89 | 32.81 | 4.25 |
| *[LINC-PINT]94* | *mC*mC*mU*mU*mC*T*G*C*T*G*C*C*A*A*G*mC*mC*mC*mC*mA* | *A10* | *104.33* | *96.69* | *85.57* | *3.71* |
| [LINC-PINT]98 | mC*mA*mU*mC*mC*C*T*T*C*T*G*C*T*G*C*mC*mA*mA*mG*mC | F8 | 70.60 | 65.09 | 54.34 | 8.23 |
| [LINC-PINT]99 | mC*mC*mA*mU*mC*C*C*T*T*C*T*G*C*T*G*mC*mC*mA*mA*mG | C10 | 85.43 | 92.72 | 52.57 | 5.67 |