**Additional File 1 (Tables) Supporting information for**

**LncRNA IGFL2-AS1 mediates NSCLC chemoresistance via YBX1-induced HSPA1A/RAP1 activation**

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**Table 1**. Primers used for quantitative real-time PCR and RNA pull-down assays

|  |  |
| --- | --- |
| **Name** | **Primer 5′-3′** |
| *IGFL2-AS1-F1* | ACAAAGCCTGTTGGTGGA |
| *IGFL2-AS1-R1* | TGGGTGGATCTCATGGAG |
| *C/EBPβ-F* | CTGGAGACGCAGCACAAGGT |
| *C/EBPβ-R* | TGAACAAGTTCCGCAGGGTG |
| *USF-2-F* | CCATCCGTCTGTCTGTCGC |
| *USF-2-R* | CCTCCTTCCCATCAGCACC |
| *HSPA1A-F* | CTGCGACAGTCCACTACCTT |
| *HSPA1A-R* | CGGCTCCGCTCTGAGATT |
| *YBX1-F* | ACTGCCATAAAGAAGAATAACC |
| *YBX1-R* | CTGCCTTGAACTGGAACAC |
| *IGFL2-AS1 sense-F* | TAATACGACTCACTATAGGGAGCCCAGTTGCACCCA |
| *IGFL2-AS1 sense-R* | TCGGGGCATAATAGAAGGCT |
| *IGFL2-AS1an-tisense-F* | TAATACGACTCACTATAGGGTCGGGGCATAATAGAA |
| *IGFL2-AS1an-tisense-R* | AGCCCAGTTGCACCCAAGTA |
| *HNRNPA1-F* | TGACTCCGTGGATAAGAT |
| *HNRNPA1-R* | AGAACCACTTCGACCTCT |
| *RAP1-F* | CCTTCTTAGCGTCTGGTC |
| *RAP1-R* | CAATCCTCCGAGCTACATT |
| *SRC-F* | CGGCTTGTGGGTGATGTT |
| *SRC-R* | CCTGGACTCTTGGCTCTTCTA |
| *AFDN-F* | CGGGCACTCATCTTTACT |
| *AFDN-R* | AACTGTCTTACTACGCTCCTA |
| *VAV3-F* | CCATCCTGGGAGTGTATT |
| *VAV3-R* | GAAAGGGCCAAGTTAGTG |
| *MAP2K6-F* | ACTTGGTGGACTCTGTTG |
| *MAP2K6-R* | TGAATCATAGGGAAATCG |
| *PIK3R1-F* | GTATGTTGGTTACCCTCCTA |
| *PIK3R1-R* | ATGACCATGACTTTAGCG |
| *PLCE1-F* | GGAGAATCCTCGGTAGAA |
| *PLCE1-R* | TTGGTTGTCAGCGTATGT |
| *Snail-F* | TCCACGAGGTGTGACTAACT |
| *Snail-R* | CCGACAAGTGACAGCCATTA |
| *Twist-F* | CTAGAGACTCTGGAGCTGGATA |
| *Twist-R* | TCTGGGAATCACTGTCCACG |
| *Vimentin-F* | CGCCAACTACATCGACAAGGTGC |
| *Vimentin-R* | CTGGTCCACCTGCCGGCGCAG |
| *E-cadherin-F* | ACGCATTGCCACATACAC |
| *E-cadherin-R* | ACCTTCCATGACAGACCC |
| *ABCG2-F* | ACGAACGGATTAACAGGGTCA |
| *ABCG2-R* | CTCCAGACACACCACGGAT |
| *OCT4-F* | AGCGACTATGCACAACGA |
| *OCT4-R* | CCAGAGTGGTGACGGAGA |
| *Nango-F* | CTCCTCCCATCCCTCATA |
| *Nango-R* | AGGCTCCAACCATACTCC |
| *GAPDH-F* | CTCCTCCTGTTCGACAGTCAGC |
| *GAPDH-R* | CCCAATACGACCAAATCCGTT |
| *U6-F* | CTCGCTTCGGCAGCACA |
| *U6-R* | AACGCTTCACGAATTTGCGT |

**Table 2.** Antibodies for immunoblot and immunohistochemistry

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Antibody Name** | **Catalog Number** | **Company** | **Source** | **Observed MW** | **Recommended Dilutions** |
| C/EBPβ | BM3970 | BOSTER BIOLOGICAL TECHNOLOGY，Wuhan, China. | Rabbit | 42KD | WB: 1:500 |
| HSPA1A | AF5466 | Affinity Biosciences, Jiangsu, China. | Rabbit | 70KD | WB: 1:500  IHC: 1:50. |
| YBX1 | 20339-1-AP | Proteintech Group, Inc., Wuhan, China. | Rabbit | 50KD | WB: 1:2000  IHC: 1:50 |
| RAP1 | R389081 | ZEN-BIOSCIENCE,  Chengdu, China. | Rabbit | 20KD | WB: 1:1000 |
| Ki67 | A00254 | BOSTER BIOLOGICAL TECHNOLOGY, Wuhan, China | Rabbit | 358KD | IHC: 1:50 |
| Vimentin | PB9359 | BOSTER BIOLOGICAL TECHNOLOGY, Wuhan, China | Rabbit | 56KD | IHC: 1:50 |
| SOX2 | BM4147 | BOSTER BIOLOGICAL TECHNOLOGY, Wuhan, China | Rabbit | 36KD | IHC: 1:50 |
| HNRNPA1 | A01476 | BOSTER BIOLOGICAL TECHNOLOGY, Wuhan, China | Rabbit | 39KD | WB: 1:500 |
| α-Tubulin | BM1452 | BOSTER BIOLOGICAL TECHNOLOGY, Wuhan, China. | Mouse | 55KD | WB: 1:2000 |
| Mouse anti DDDDK-Tag mAb | AE005 | ABclonal, Wuhan, China. | Mouse | 35 KD | WB: 1:1000 |
| HRP Conjugate AffiniPure Goat Anti-rabbit IgG (H+L) | BA1054 | BOSTER BIOLOGICAL TECHNOLOGY, Wuhan, China. | Goat | / | WB: 1:10000 |
| HRP Conjugate AffiniPure Goat Anti-mouse IgG (H+L) | BA1050 | BOSTER BIOLOGICAL TECHNOLOGY, Wuhan, China. | Goat | / | WB: 1:10000 |

**Table 3**. Primers used for chromatin immunoprecipitation

|  |  |
| --- | --- |
| **Name** | **Primer 5′-3′** |
| Cebpb-1-F | ATCCACCCATGACCTCGGGT |
| Cebpb-1-R | ATCCACCCATGACCTCGGGT |
| Cebpb-2-F | TTCAACTCTCACCTGACCCA |
| Cebpb-2-R | AGTGCCATTTTCTGGCCATT |
| Cebpb-3-F | TACACATCAGTTCCTCCCTA |
| Cebpb-3-R | AGAGCTTGGGGTGGAGACTG |
| Cebpb-4-F | ACAAGTATGGGACACTTTTA |
| Cebpb-4-R | GTGTCCTCTGCAGCACGTCG |
| Cebpb-5-F | TTCTTGCCTAAGTGCTGCTG |
| Cebpb-5-R | TACCTGCCTCGAGCCATCCC |
| Cebpb-6-F | AGTCCAGTGCTCCTGTCTCT |
| Cebpb-6-R | ACGGGGCTGGCGGAGGCATT |
| Cebpb-7-F | CGTGGAGTCCCCAACCCTAT |
| Cebpb-7-R | GTTCCAACCCCTGAGGATCA |
| Cebpb-8-F | AGGTGTGGTTGCTCACACTT |
| Cebpb-8-R | TGTCATGTTGCCCAGGCTTG |
| Cebpb-9-F | ACTGCTTTCTGCAGCAGAAT |
| Cebpb-9-R | ACCCAGAGGCTGCCTCTGGC |
| Cebpb-10-F | AGATGGCTCACACTGCTCAC |
| Cebpb-10-R | CCACTACCACCAAGACACAG |
| IGFL2-AS1-P1-R | CTGCCACCACACTCAGGTAT |
| IGFL2-AS1-P2-F | ATCGGAGACTCATGCCTGTA |
| IGFL2-AS1-P2-R | AGTAGAGACAGGGTTTCACT |
| IGFL2-AS1-P3-F | CACTGAGGGAGAGGACTGGG |
| IGFL2-AS1-P3-R | AAGTTCTTGTTGCAGGTAGC |
| IGFL2-AS1-P4-F | CAACTCTCTGGTGTCAGGCC |
| IGFL2-AS1-P4-R | GGAGCAAATCACAATGATGG |
| IGFL2-AS1-P5-F | ATTGTGATTTGCTCCTGCCC |
| IGFL2-AS1-P5-R | AAGGTGGTTATCTCTTGTGG |
| HSPA1A-P1-F | TTCCAGCTACTCGGATGGCT |
| HSPA1A-P1-R | CTGCCTCAGCCTTCCGAGTA |
| HSPA1A-P2-F | CAGAGCTTGCAGTGAGCCAA |
| HSPA1A-P2-R | ATAGACACTAAACCCTTTAT |
| HSPA1A-P3-F | TGAAGCGCAGGCGGTCAGCA |
| HSPA1A-P3-R | TGCTCAGAACTCTCCAGAGT |

**Table 4.** Database of tissue microarray (HLugA180Su11, *n* = 90)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Tissue Number** | **Date of Surgery** | **Follow-up Time（2021.12）** | **Survival Status** | **Survival Duration** | **Gender** | **Age** | **H-score =Σ(Staining Intensity×%Positive Cells)** | | | |
| **Tissue Type** | **IGFL2-AS1** | **YBX1** | **HSPA1A** |
| A01/A02 | 2013/12/2 | 2019/6/3 | Death | 66 | Woman | 58 | Cancer | 0.00 | 0.90 | 0.00 |
| Paracancer | 0.00 | 0.00 | 0.00 |
| A03/A04 | 2013/12/12 | 2015/12/23 | Death | 24 | Man | 62 | Cancer | 1.60 | 1.425 | 1.25 |
| Paracancer | 0.10 | 0.20 | 0.90 |
| A05/A06 | 2013/12/19 | 2021/12/1 | Alive | 95 | Man | 49 | Cancer | 0.40 | 1.425 | 0.25 |
| Paracancer | 0.10 | 0.90 | 0.90 |
| A07/A08 | 2013/12/25 | 2014/3/10 | Death | 2 | Woman | 64 | Cancer | 1.35 | 1.90 | 3.10 |
| Paracancer | 0.20 | 0.20 | 0.90 |
| A09/A10 | 2013/12/30 | 2021/12/1 | Alive | 95 | Woman | 61 | Cancer | 0.98 | 1.43 | 2.28 |
| Paracancer | 0.00 | 0.10 | 0.60 |
| A11/A12 | 2013/12/31 | 2018/5/7 | Death | 52 | Woman | 63 | Cancer | 0.00 | 0.65 | 1.40 |
| Paracancer | 0.00 | 0.10 | 0.10 |
| A13/A14 | 2014/1/2 | 2021/12/1 | Alive | 94 | Man | 67 | Cancer | 1.28 | 1.35 | 1.63 |
| Paracancer | 0.00 | 0.03 | 0.05 |
| A15/A16 | 2014/1/2 | 2021/12/1 | Alive | 94 | Woman | 62 | Cancer | 0.85 | 1.35 | 1.95 |
| Paracancer | 0.00 | 0.00 | 0.20 |
| A17/A18 | 2014/1/2 | 2021/1/6 | Death | 84 | Woman | 62 | Cancer | 0.10 | 1.35 | 2.75 |
| Paracancer | 0.00 | 0.05 | 0.20 |
| B01/B02 | 2014/1/3 | 2016/1/15 | Death | 24 | Man | 72 | Cancer | 0.80 | 1.90 | 2.03 |
| Paracancer | 0.10 | 0.00 | 0.10 |
| B03/B04 | 2014/5/20 | 2021/12/1 | Alive | 90 | Woman | 53 | Cancer | 0.85 | 1.43 | 1.73 |
| Paracancer | 0.20 | 0.00 | 0.15 |
| B05/B06 | 2014/6/2 | 2015/8/13 | Death | 14 | Man | 71 | Cancer | 0.40 | 1.05 | 0.00 |
| Paracancer | 0.90 | 0.10 | 0.00 |
| B07/B08 | 2014/6/3 | 2021/12/1 | Alive | 89 | Woman | 48 | Cancer | 0.30 | 0.68 | 2.25 |
| Paracancer | 0.60 | 0.00 | 0.10 |
| B09/B10 | 2014/6/3 | 2021/12/1 | Alive | 89 | Man | 59 | Cancer | 0.80 | 1.20 | 1.50 |
| Paracancer | 0.40 | 0.00 | 0.20 |
| B11/B12 | 2014/6/4 | 2021/12/1 | Alive | 89 | Man | 67 | Cancer | 0.55 | 1.20 | 1.85 |
| Paracancer |  | 0.00 | 0.15 |
| B13/B14 | 2014/6/5 | 2016/9/22 | Death | 27 | Man | 71 | Cancer | 1.28 | 1.80 | 1.70 |
| Paracancer | 0.10 | 0.00 | 0.45 |
| B15/B16 | 2014/6/5 | 2015/12/7 | Death | 18 | Man | 58 | Cancer | 0.05 | 1.80 | 0.00 |
| Paracancer | 0.10 | 0.10 | 0.00 |
| B17/B18 | 2014/6/5 | 2016/8/15 | Death | 26 | Woman | 44 | Cancer | 0.00 | 1.43 | 2.60 |
| Paracancer | 0.00 | 0.00 | 0.30 |
| C01/C02 | 2014/6/5 | 2017/8/2 | Death | 37 | Woman | 68 | Cancer | 0.00 | 1.90 | 1.10 |
| Paracancer | 0.00 | 0.00 | 0.10 |
| C03/C04 | 2014/6/6 | 2020/4/16 | Death | 70 | Woman | 66 | Cancer | 0.20 | 1.35 | 2.05 |
| Paracancer | 0.40 | 0.00 | 0.05 |
| C05/C06 | 2014/6/12 | 2018/6/18 | Death | 48 | Man | 50 | Cancer | 1.80 | 1.35 | 0.25 |
| Paracancer | 0.30 | 0.08 | 0.00 |
| C07/C08 | 2014/6/17 | 2018/10/19 | Death | 52 | Woman | 66 | Cancer | 1.35 | 0.00 | 2.93 |
| Paracancer | 0.40 | 0.00 | 0.45 |
| C09/C10 | 2014/6/23 | 2019/7/7 | Death | 60 | Woman | 48 | Cancer | 1.43 | 1.35 | 3.10 |
| Paracancer | 0.30 | 0.05 | 0.30 |
| C11/C12 | 2014/6/23 | 2016/12/20 | Death | 29 | Man | 60 | Cancer | 1.90 | 1.425 | 3.80 |
| Paracancer | 0.90 | 0.00 | 0.30 |
| C13/C14 | 2014/11/4 | 2021/12/1 | Alive | 84 | Woman | 62 | Cancer | 1.80 | 0.83 | 0.00 |
| Paracancer | 0.10 | 0.00 | 0.00 |
| C15/C16 | 2014/11/4 | 2021/12/1 | Alive | 84 | Man | 46 | Cancer | 0.85 | 1.35 | 2.30 |
| Paracancer | 0.30 | 0.20 | 1.20 |
| C17/C18 | 2014/11/10 | 2016/11/28 | Death | 24 | Man | 69 | Cancer | 0.75 | 2.85 | 2.35 |
| Paracancer | 0.50 | 0.05 | 0.15 |
| D01/D02 | 2014/11/10 | 2016/2/4 | Death | 14 | Man | 67 | Cancer | 1.80 | 1.80 | 1.48 |
| Paracancer | 0.20 | 0.00 | 0.05 |
| D03/D04 | 2014/11/10 | 2016/9/17 | Death | 22 | Woman | 54 | Cancer | 0.60 | 1.90 | 1.63 |
| Paracancer | 0.60 | 0.30 | 1.60 |
| D05/D06 | 2014/11/11 | 2016/12/7 | Death | 24 | Man | 72 | Cancer | 1.28 | 2.85 | 2.00 |
| Paracancer | 0.20 | 0.45 | 0.80 |
| D07/D08 | 2014/11/18 | 2020/3/12 | Death | 63 | Woman | 65 | Cancer | 1.90 | 1.43 | 3.00 |
| Paracancer | 0.90 | 0.00 | 0.30 |
| D09/D10 | 2014/11/18 | 2017/2/4 | Death | 26 | Man | 74 | Cancer | 1.60 | 0.00 | 0.75 |
| Paracancer | 0.90 | 0.00 | 0.10 |
| D11/D12 | 2014/11/18 | 2021/12/1 | Alive | 84 | Man | 70 | Cancer | 1.90 | 1.35 | 2.10 |
| Paracancer | 1.35 | 0.00 | 1.20 |
| D13/D14 | 2014/11/24 | 2021/12/1 | Alive | 84 | Man | 47 | Cancer | 1.28 | 1.20 | 1.95 |
| Paracancer | 0.23 | 0.00 | 0.15 |
| D15/D16 | 2014/11/24 | 2021/12/1 | Alive | 84 | Man | 61 | Cancer | 1.70 | 0.15 | 0.00 |
| Paracancer | 0.00 | 0.00 | 0.00 |
| D17/D18 | 2014/11/25 | 2019/3/27 | Death | 52 | Woman | 66 | Cancer | 1.35 | 1.30 | 3.15 |
| Paracancer | 0.10 | 0.00 | 0.15 |
| E01/E02 | 2014/11/26 | 2017/1/10 | Death | 25 | Man | 62 | Cancer | 1.43 | 1.90 | 1.25 |
| Paracancer | 0.40 | 0.05 | 0.10 |
| E03/E04 | 2014/11/27 | 2021/12/1 | Alive | 84 | Man | 37 | Cancer | 1.28 | 0.10 | 0.30 |
| Paracancer | 0.30 | 0.00 | 0.30 |
| E05/E06 | 2014/12/1 | 2017/12/23 | Death | 36 | Woman | 66 | Cancer | 1.80 | 1.90 | 2.10 |
| Paracancer | 0.60 | 0.00 | 1.80 |
| E07/E08 | 2014/12/2 | 2017/12/11 | Death | 36 | Man | 44 | Cancer | 0.30 | 0 | 0.00 |
| Paracancer | 0.90 | 0 | 1.60 |
| E09/E10 | 2014/12/2 | 2017/1/12 | Death | 25 | Woman | 42 | Cancer | 1.43 | 1.90 | 1.95 |
| Paracancer | 0.20 | 0.90 | 1.60 |
| E11/E12 | 2014/12/4 | 2015/7/27 | Death | 7 | Man | 57 | Cancer | 0.80 | 1.90 | 2.30 |
| Paracancer | 0.05 | 0.00 | 0.15 |
| E13/E14 | 2014/12/5 | 2021/12/1 | Alive | 83 | Man | 67 | Cancer | 0.05 | 1.20 | 2.00 |
| Paracancer | 0.40 | 0.00 | 0.20 |
| E15/E16 | 2014/12/8 | 2021/12/1 | Alive | 83 | Woman | 72 | Cancer | 0.90 | 0.30 | 1.35 |
| Paracancer | 0.00 | 0.10 | 0.60 |
| E17/E18 | 2014/12/9 | 2016/7/22 | Death | 19 | Man | 49 | Cancer | 0.30 | 1.90 | 2.70 |
| Paracancer | 0.10 | 0.20 | 0.20 |
| F01/F02 | 2014/12/10 | 2017/7/13 | Death | 31 | Woman | 67 | Cancer | 0.00 | 1.90 | 2.80 |
| Paracancer | 0.00 | 0.20 | 0.30 |
| F03/F04 | 2014/12/11 | 2017/12/29 | Death | 36 | Woman | 46 | Cancer | 1.28 | 1.80 | 1.03 |
| Paracancer | 0.15 | 0.00 | 0.15 |
| F05/F06 | 2014/12/11 | 2018/6/4 | Death | 41 | Man | 53 | Cancer | 0.90 | 1.90 | 2.00 |
| Paracancer | 0.40 | 0.60 | 0.20 |
| F07/F08 | 2014/12/11 | 2021/12/1 | Alive | 83 | Man | 47 | Cancer | 0.40 | 1.90 | 2.25 |
| Paracancer | 0.30 | 0.05 | 1.60 |
| F09/F10 | 2014/12/15 | 2021/12/1 | Alive | 83 | Man | 65 | Cancer | 0.80 | 1.90 | 0.06 |
| Paracancer | 1.05 | 0.00 | 0.05 |
| F11/F12 | 2014/12/16 | 2021/12/1 | Alive | 83 | Woman | 57 | Cancer | 1.35 | 1.43 | 0.00 |
| Paracancer | 0.45 | 0.00 | 0.00 |
| F13/F14 | 2014/12/17 | 2015/5/25 | Death | 5 | Man | 65 | Cancer | 1.35 | 0.70 | 0.00 |
| Paracancer | 0.30 | 0.05 | 0.00 |
| F15/F16 | 2014/12/22 | 2015/8/18 | Death | 7 | Man | 70 | Cancer | 1.43 | 1.80 | 0.00 |
| Paracancer | 0.00 | 0.10 | 0.00 |
| F17/F18 | 2014/12/23 | 2017/6/30 | Death | 30 | Man | 75 | Cancer | 0.20 | 0.20 | 2.00 |
| Paracancer | 0.40 | 0.20 | 0.90 |
| G01/G02 | 2014/12/23 | 2017/1/28 | Death | 25 | Man | 68 | Cancer | 1.43 | 2.00 | 1.95 |
| Paracancer | 0.60 | 0.05 | 0.20 |
| G03/G04 | 2014/12/23 | 2016/9/15 | Death | 20 | Man | 49 | Cancer | 0.90 | 1.90 | 2.25 |
| Paracancer | 0.00 | 0.00 | 0.00 |
| G05/G06 | 2014/12/25 | 2017/2/7 | Death | 25 | Man | 58 | Cancer | 0.90 | 1.90 | 2.20 |
| Paracancer | 0.10 | 0.10 | 0.60 |
| G07/G08 | 2014/12/26 | 2017/7/10 | Death | 30 | Man | 48 | Cancer | 0.10 | 0.80 | 0.00 |
| Paracancer | 0.30 | 0.10 | 0.10 |
| G09/G10 | 2014/12/29 | 2021/12/1 | Alive | 83 | Woman | 51 | Cancer | 0.90 | 1.90 | 1.65 |
| Paracancer | 0.40 | 0.00 | 0.00 |
| G11/G12 | 2014/12/29 | 2021/12/1 | Alive | 83 | Woman | 71 | Cancer | 0.00 | 0.00 | 0.00 |
| Paracancer | 0.00 | 0.00 | 0.00 |
| G13/G14 | 2015/1/7 | 2016/7/17 | Death | 18 | Man | 51 | Cancer | 0.90 | 1.425 | 2.60 |
| Paracancer | 0.10 | 0.45 | 1.20 |
| G15/G16 | 2015/1/9 | 2019/4/23 | Death | 51 | Woman | 51 | Cancer | 1.28 | 0.90 | 0.16 |
| Paracancer | 0.10 | 0.00 | 0.90 |
| G17/G18 | 2015/1/9 | 2016/7/1 | Death | 17 | Woman | 58 | Cancer | 0.00 | 1.35 | 1.70 |
| Paracancer | 0.00 | 0.05 | 0.10 |
| H01/H02 | 2015/1/9 | 2020/7/9 | Death | 66 | Man | 67 | Cancer | 0.00 | 0.40 | 1.50 |
| Paracancer | 0.00 | 0.10 | 0.50 |
| H03/H04 | 2015/1/10 | 2019/4/10 | Death | 51 | Woman | 60 | Cancer | 0.00 | 1.43 | 1.38 |
| Paracancer | 0.00 | 0.30 | 0.60 |
| H05/H06 | 2015/1/13 | 2020/11/4 | Death | 69 | Woman | 68 | Cancer | 1.90 | 1.90 | 2.00 |
| Paracancer | 0.30 | 0.10 | 0.10 |
| H07/H08 | 2015/1/13 | 2021/12/1 | Alive | 82 | Man | 50 | Cancer | 1.43 | 1.05 | 1.45 |
| Paracancer | 0.20 | 0.05 | 0.10 |
| H09/H10 | 2015/1/14 | 2021/12/1 | Alive | 82 | Woman | 53 | Cancer | 1.35 | 0.90 | 1.58 |
| Paracancer | 0.00 | 0.00 | 0.00 |
| H11/H12 | 2015/1/19 | 2021/12/1 | Alive | 82 | Man | 62 | Cancer | 0.98 | 1.80 | 0.26 |
| Paracancer | 0.60 | 0.90 | 0.30 |
| H13/H14 | 2015/1/19 | 2021/12/1 | Alive | 82 | Man | 59 | Cancer | 1.28 | 1.20 | 2.05 |
| Paracancer | 0.10 | 0.20 | 0.30 |
| H15/H16 | 2015/1/22 | 2016/3/9 | Death | 13 | Woman | 64 | Cancer | 1.80 | 1.35 | 2.70 |
| Paracancer | 0.20 | 0.00 | 0.05 |
| H17/H18 | 2015/2/9 | 2019/4/9 | Death | 50 | Man | 60 | Cancer | 0.00 | 1.35 | 2.80 |
| Paracancer | 0.00 | 0.20 | 0.90 |
| I01/I02 | 2015/2/10 | 2018/7/18 | Death | 41 | Man | 53 | Cancer | 1.35 | 1.80 | 1.95 |
| Paracancer | 0.60 | 0.00 | 0.08 |
| I03/I04 | 2015/3/3 | 2017/1/24 | Death | 22 | Woman | 68 | Cancer | 1.35 | 1.90 | 1.80 |
| Paracancer | 0.60 | 0.20 | 1.20 |
| I05/I06 | 2015/3/5 | 2017/4/6 | Death | 25 | Woman | 40 | Cancer | 0.45 | 1.90 | 1.85 |
| Paracancer | 0.15 | 0.00 | 0.45 |
| I07/I08 | 2015/3/7 | 2017/7/31 | Death | 28 | Woman | 56 | Cancer | 0.83 | 1.30 | 1.80 |
| Paracancer | 0.60 | 0.00 | 0.90 |
| I09/I10 | 2015/3/18 | 2021/12/1 | Alive | 80 | Man | 59 | Cancer | 0.75 | 0.00 | 1.93 |
| Paracancer | 0.20 | 0.00 | 0.90 |
| I11/I12 | 2015/3/23 | 2021/12/1 | Alive | 80 | Woman | 60 | Cancer | 1.28 | 1.425 | 2.10 |
| Paracancer | 0.30 | 0.10 | 1.35 |
| I13/I14 | 2015/3/23 | 2016/8/31 | Death | 17 | Man | 79 | Cancer | 1.35 | 0.90 | 2.40 |
| Paracancer | 0.30 | 0.00 | 0.30 |
| I15/I16 | 2015/3/25 | 2021/12/1 | Alive | 80 | Woman | 72 | Cancer | 1.28 | 1.43 | 1.30 |
| Paracancer | 0.00 | 0.00 | 0.05 |
| I17/I18 | 2015/3/31 | 2019/12/6 | Death | 56 | Man | 61 | Cancer | 0.20 | 0.80 | 0.55 |
| Paracancer | 0.00 | 0.10 | 1.20 |
| J01/J02 | 2015/4/3 | 2016/9/16 | Death | 17 | Man | 70 | Cancer | 1.50 | 1.90 | 2.00 |
| Paracancer | 1.20 | 0.00 | 0.45 |
| J03/J04 | 2015/4/3 | 2020/9/17 | Death | 65 | Woman | 57 | Cancer | 1.43 | 1.90 | 1.63 |
| Paracancer | 0.45 | 0.10 | 0.20 |
| J05/J06 | 2015/4/13 | 2021/12/1 | Alive | 79 | Woman | 59 | Cancer | 1.43 | 1.90 | 2.23 |
| Paracancer | 0.20 | 0.00 | 0.45 |
| J07/J08 | 2015/4/13 | 2021/12/1 | Alive | 79 | Man | 50 | Cancer | 0.68 | 0.53 | 1.53 |
| Paracancer | 0.23 | 0.90 | 0.90 |
| J09/J10 | 2015/6/16 | 2021/12/1 | Alive | 77 | Woman | 50 | Cancer | 1.43 | 1.80 | 0.00 |
| Paracancer | 0.30 | 0.10 | 0.00 |
| J11/J12 | 2015/6/16 | 2019/7/16 | Death | 49 | Woman | 69 | Cancer | 1.28 | 0.00 | 2.05 |
| Paracancer | 0.10 | 0.00 | 1.60 |
| J13/J14 | 2015/7/6 | 2019/11/27 | Death | 52 | Woman | 60 | Cancer | 0.35 | 1.20 | 2.00 |
| Paracancer | 0.00 | 0.00 | 1.35 |
| J15/J16 | 2015/7/6 | 2016/6/14 | Death | 11 | Woman | 65 | Cancer | 0.00 | 1.425 | 2.80 |
| Paracancer | 0.00 | 0.00 | 0.45 |
| J17/J18 | 2015/7/20 | 2021/12/1 | Alive | 76 | Man | 52 | Cancer | 0.70 | 1.43 | 1.63 |
| Paracancer | 0.00 | 0.90 | 1.80 |

This tissue microarray comprised 90 pairs of lung adenocarcinoma tissues and matched adjacent normal tissues. All enrolled patients had not received preoperative radiotherapy, chemotherapy, or any adjuvant antitumor therapies. Pathological confirmation of lung adenocarcinoma was established through hematoxylin-eosin staining, with complete clinicopathological record,s including sex, age, and survival outcomes. The patient population, aged 37–79 years, underwent surgical resection between December 2013 and July 2015, with follow-up data collected through December 2021. Tissue microarray analysis revealed that IGFL2-AS1 expression levels were determined by in situ hybridization, while protein expressions of YBX1 and HSPA1A were quantitatively assessed using immunohistochemical staining.