Supplementary Table 1: The list of rabbit IgG co-immunoprecipitated human proteins from HeLa cells lysate. These proteins were used to eliminate false positive that identified from anti-C1ORF123 co-immunoprecipitated proteins.

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| --- | --- | --- | --- | --- |
| No. | UniProt ID | Accession no | Protein name | Length |
| 1 | P04264 | K2C1\_HUMAN | Keratin, type II cytoskeletal 1 | 644 |
| 2 | P08708 | RS17\_HUMAN | 40S ribosomal protein S17  | 135 |
| 3 | P13645 | K1C10\_HUMAN | Keratin, type I cytoskeletal 10  | 584 |
| 4 | P35908 | K22E\_HUMAN | Keratin, type II cytoskeletal 2 epidermal | 639 |
| 5 | P35527 | K1C9\_HUMAN | Keratin, type I cytoskeletal 9 (  | 623 |
| 6 | P60709 | ACTB\_HUMAN | Actin, cytoplasmic 1  | 375 |
| 7 | Q562R1 | ACTBL\_HUMAN | Beta-actin-jenis protein 2  | 376 |
| 8 | Q93077 | H2A1C\_HUMAN | Histone H2A type 1-C  | 130 |
| 9 | Q99878 | H2A1J\_HUMAN | Histone H2A type 1-J  | 128 |
| 10 | Q16777 | H2A2C\_HUMAN | Histone H2A type 2-C  | 129 |
| 11 | Q96KK5 | H2A1H\_HUMAN | Histone H2A type 1-H  | 128 |
| 12 | P0C0S8 | H2A1\_HUMAN | Histone H2A type 1  | 130 |
| 13 | P20671 | H2A1D\_HUMAN | Histone H2A type 1-D) | 130 |
| 14 | Q7L7L0 | H2A3\_HUMAN | Histone H2A type 3 | 130 |
| 15 | Q6FI13 | H2A2A\_HUMAN | Histone H2A type 2-A  | 130 |
| 16 | P04908 | H2A1B\_HUMAN | Histone H2A type 1-B/E  | 130 |
| 17 | P63261 | ACTG\_HUMAN | Actin, cytoplasmic 2  | 375 |
| 18 | P08670 | VIME\_HUMAN | Vimentin | 466 |
| 19 | O14950 | ML12B\_HUMAN | Myosin regulatory light chain 12B  | 172 |
| 20 | Q9NYL9 | TMOD3\_HUMAN | Tropomodulin-3) | 352 |
| 21 | P35579 | MYH9\_HUMAN | Myosin-9  | 1960 |
| 22 | P09493 | TPM1\_HUMAN | Tropomyosin alpha-1 chain) | 284 |
| 23 | P60660 | MYL6\_HUMAN | Myosin light polypeptide 6  | 151 |
| 24 | P68032 | ACTC\_HUMAN | Actin, alpha cardiac muscle 1  | 377 |
| 25 | P02768 | ALBU\_HUMAN | Serum albumin | 609 |
| 26 | P00761 | TRYP\_PIG | Trypsin (EC 3.4.21.4) | 231 |
| 27 | P13647 | K2C5\_HUMAN | Keratin, type II cytoskeletal 5  | 590 |
| 28 | P04259 | K2C6B\_HUMAN | Keratin, type II cytoskeletal 6B  | 564 |
| 29 | Q9BTM1 | H2AJ\_HUMAN | Histone H2A.J (H2a/j) | 129 |
| 30 | P02533 | K1C14\_HUMAN | Keratin, type I cytoskeletal 14  | 472 |
| 31 | Q9UNX3 | RL26L\_HUMAN | 60S ribosomal protein L26-like 1  | 145 |
| 32 | P61254 | RL26\_HUMAN | 60S ribosomal protein L26  | 145 |
| 33 | P62899 | RL31\_HUMAN | 60S ribosomal protein L31) | 125 |
| 34 | P19013 | K2C4\_HUMAN | Keratin, type II cytoskeletal 4  | 534 |
| 35 | P19105 | ML12A\_HUMAN | Myosin regulatory light chain 12A  | 171 |
| 36 | P35749 | MYH11\_HUMAN | Myosin-11  | 1972 |
| 37 | P06753 | TPM3\_HUMAN | Tropomyosin alpha-3 chain  | 285 |
| 38 | P35580 | MYH10\_HUMAN | Myosin-10  | 1976 |
| 39 |  P0CG39 | POTEJ\_HUMAN | POTE ankyrin domain family member J | 1038 |