

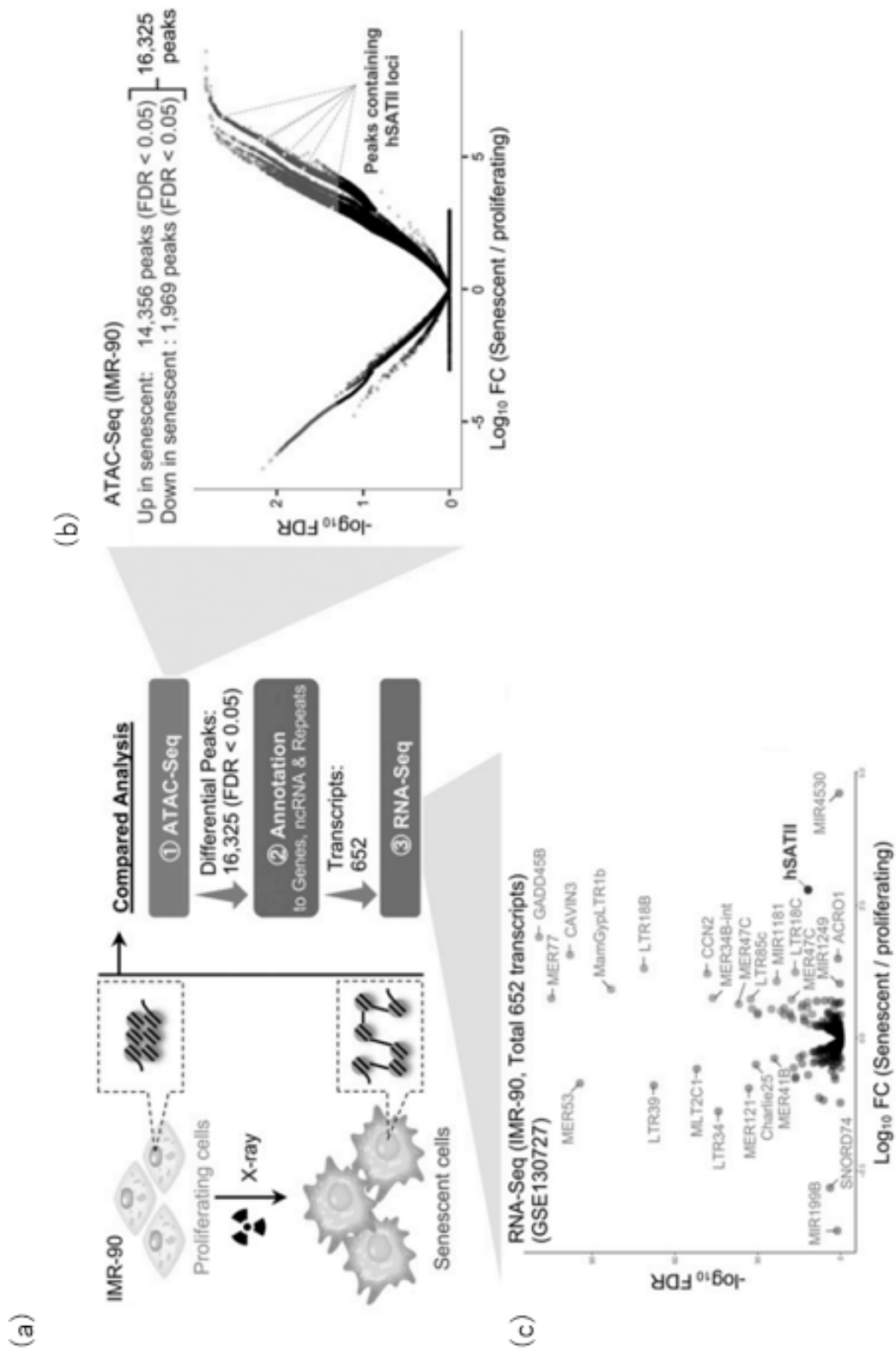
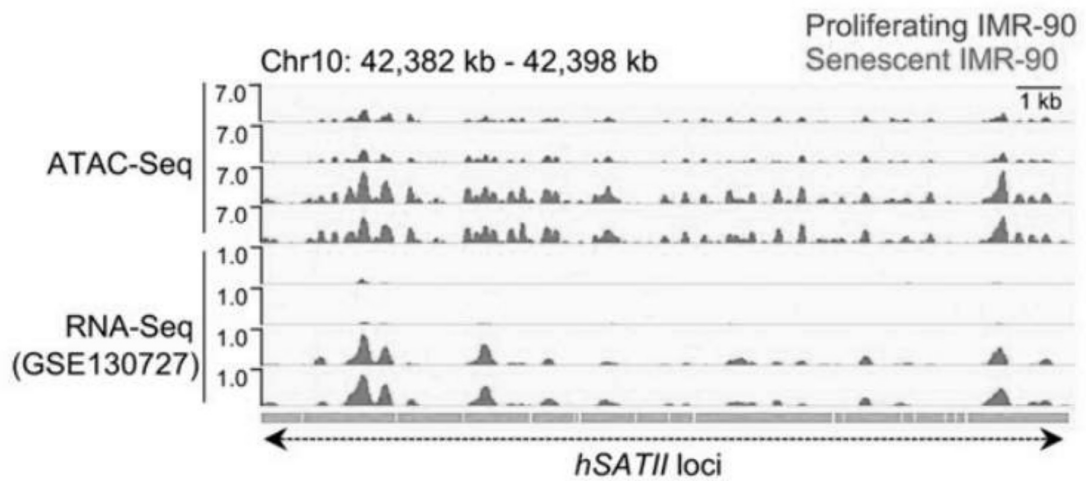
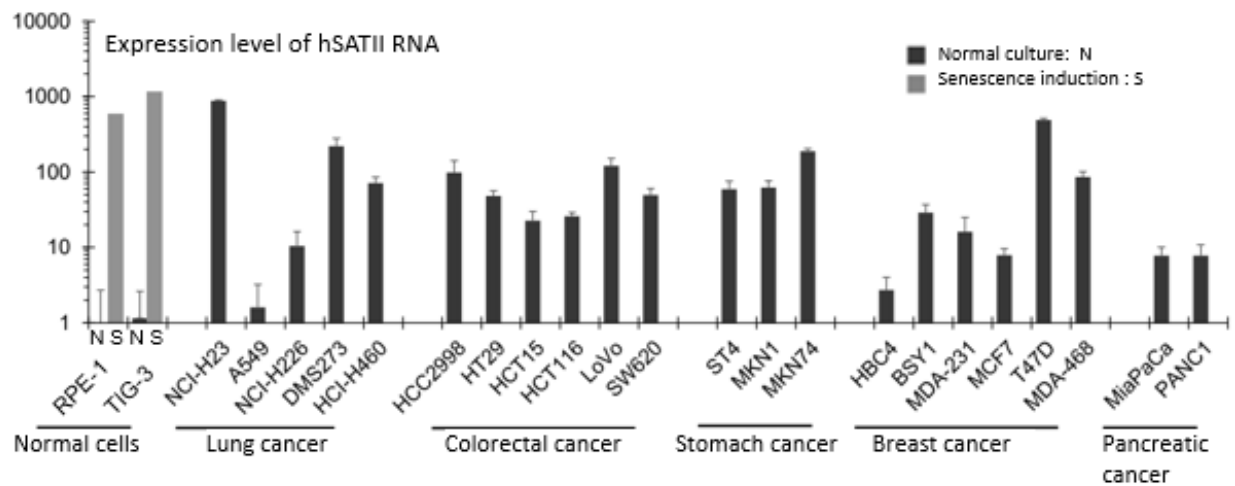


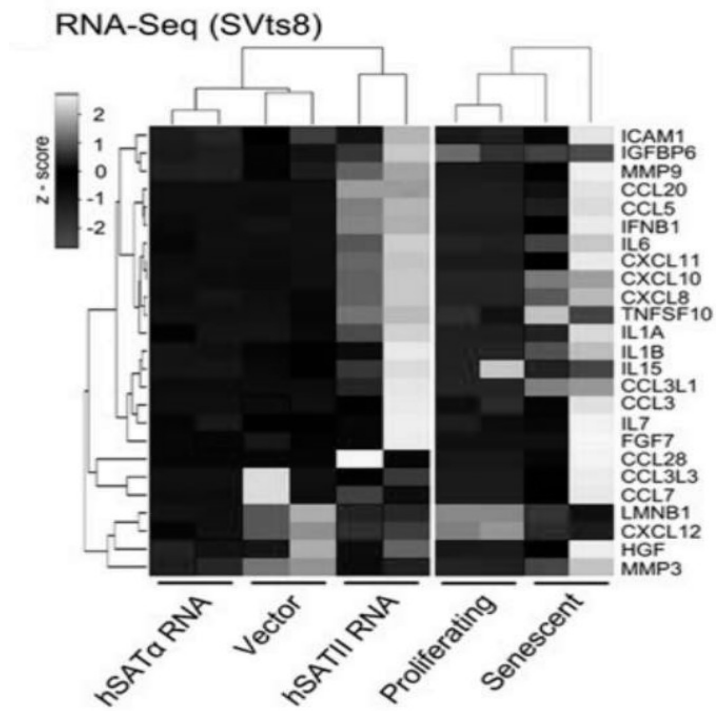
FIG.1A



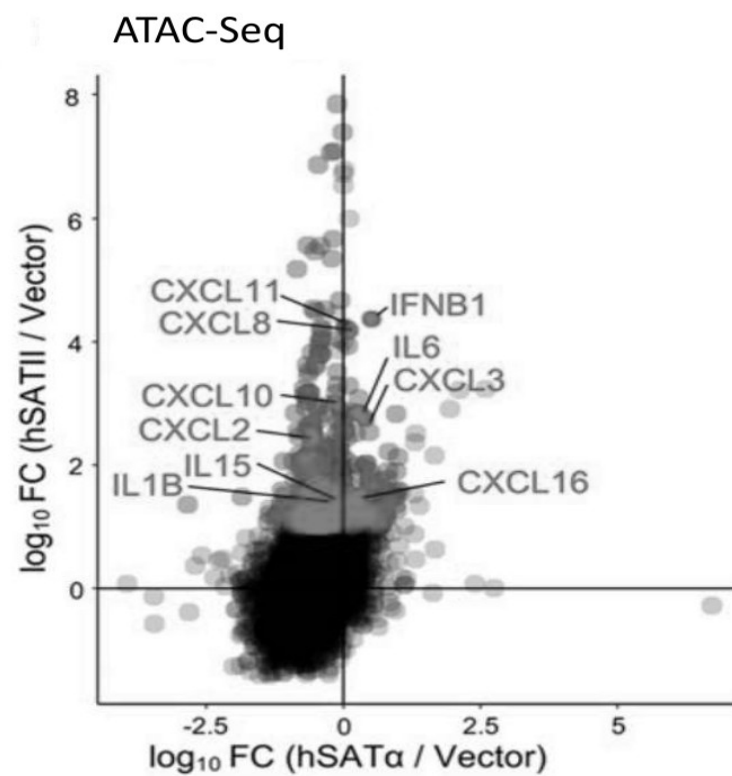
**FIG.1B**



**FIG.2**

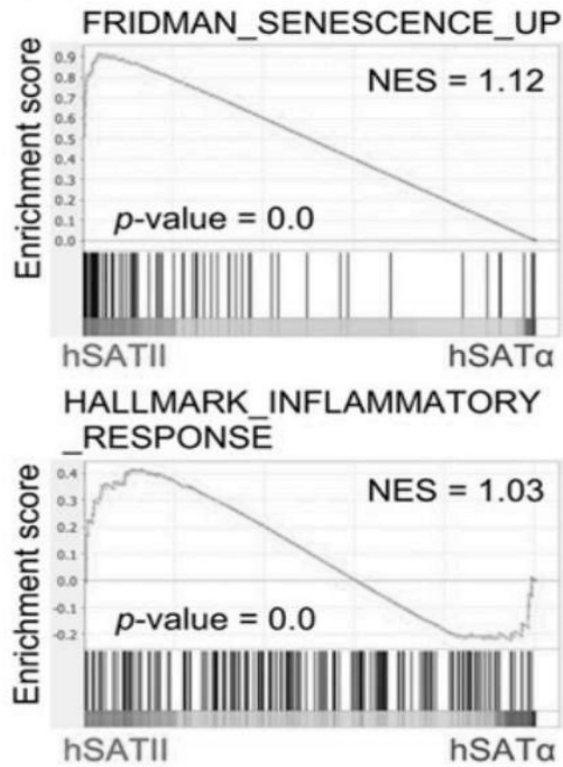


**FIG.3A**



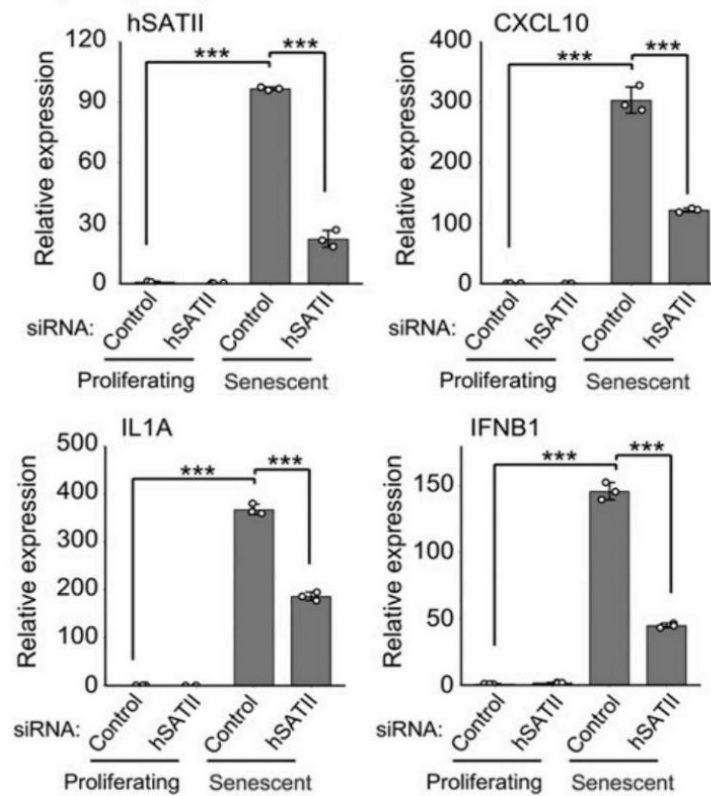
**FIG.3B**

Gene set enrichment analysis (SVts8)



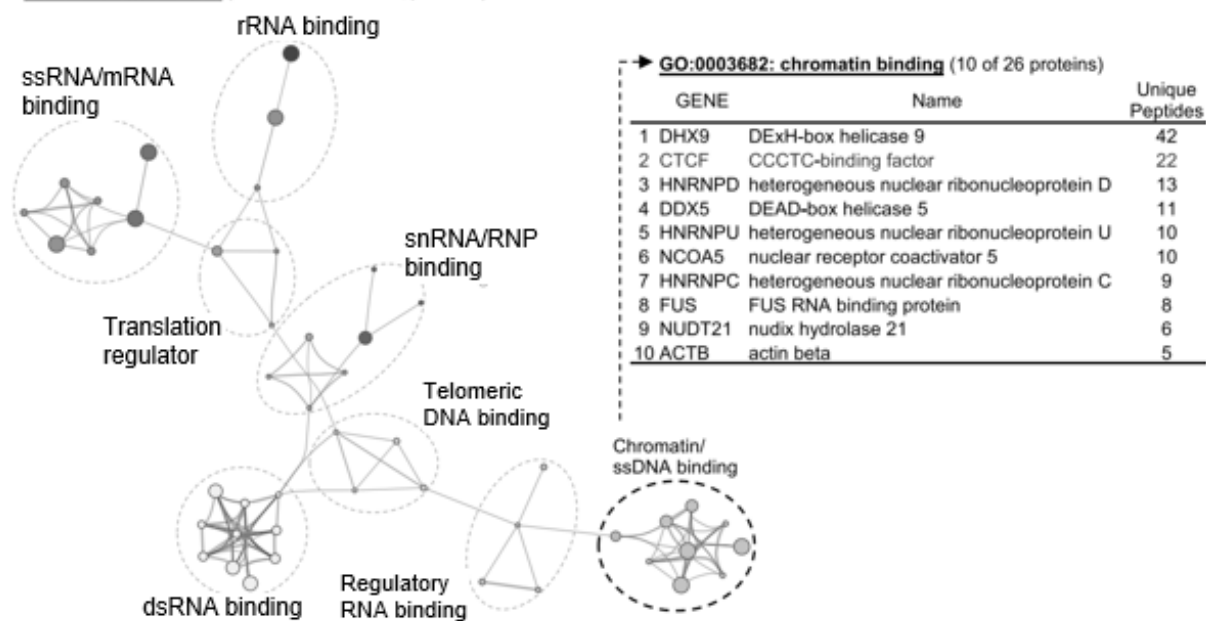
**FIG.3C**

RT-qPCR (SVts8)

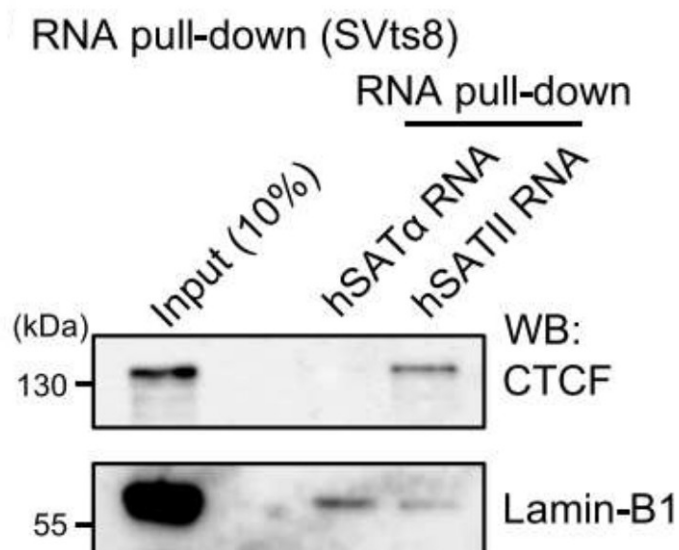


**FIG.3D**

Gene ontology analysis (Molecular Functions,  $p < 0.01$ )

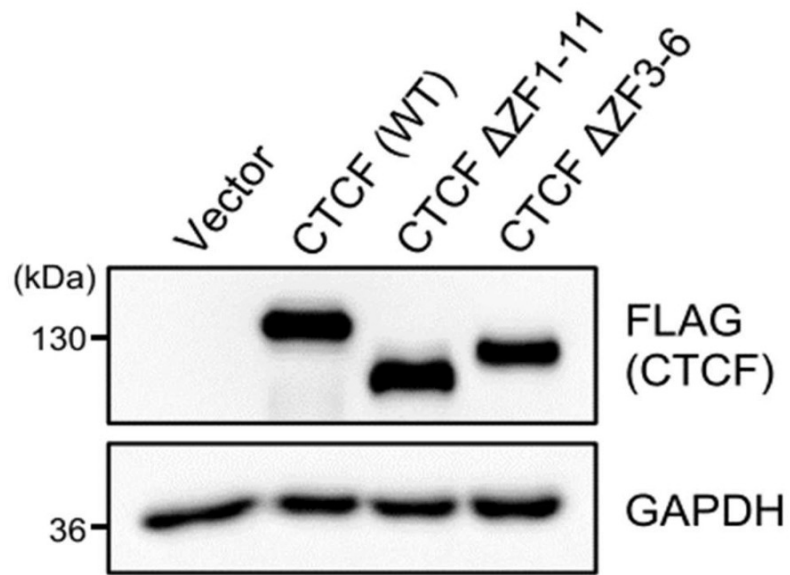


**FIG.4A**



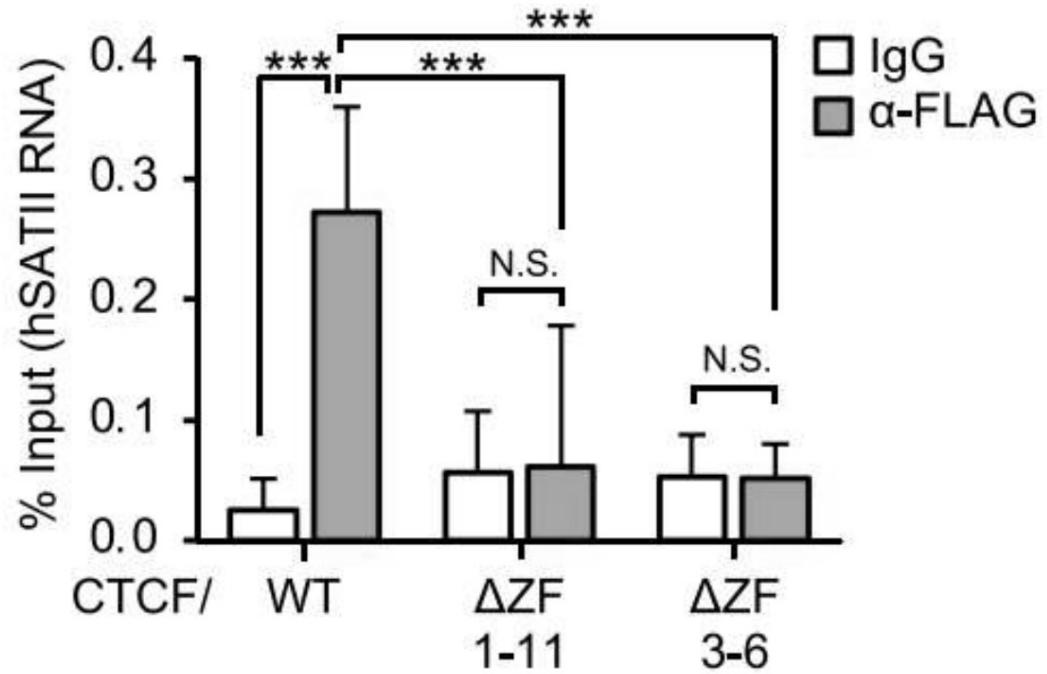
**FIG.4B**

Western blot (HEK-293T)

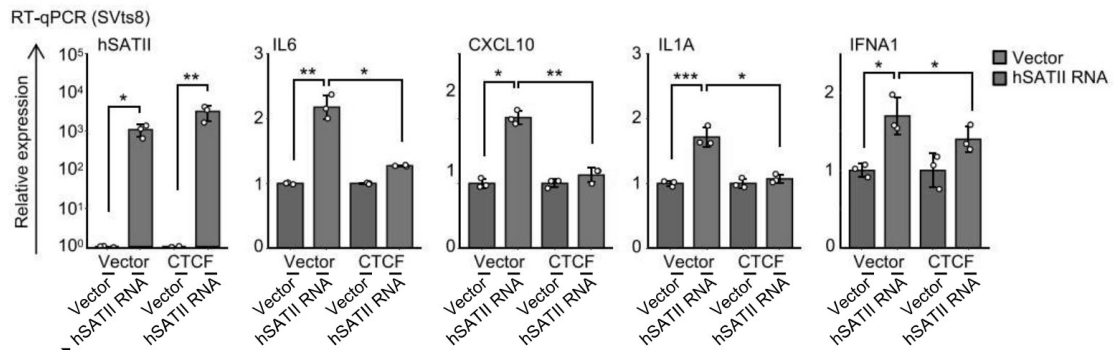


**FIG.4C**

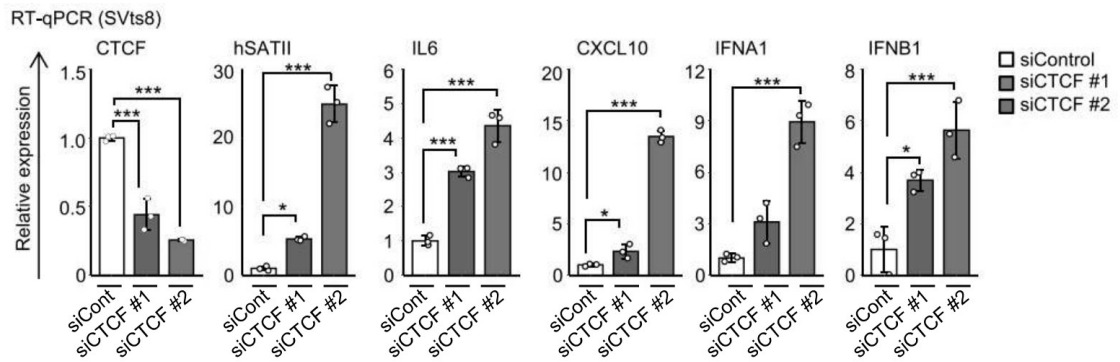
RIP-qPCR (HEK-293T)



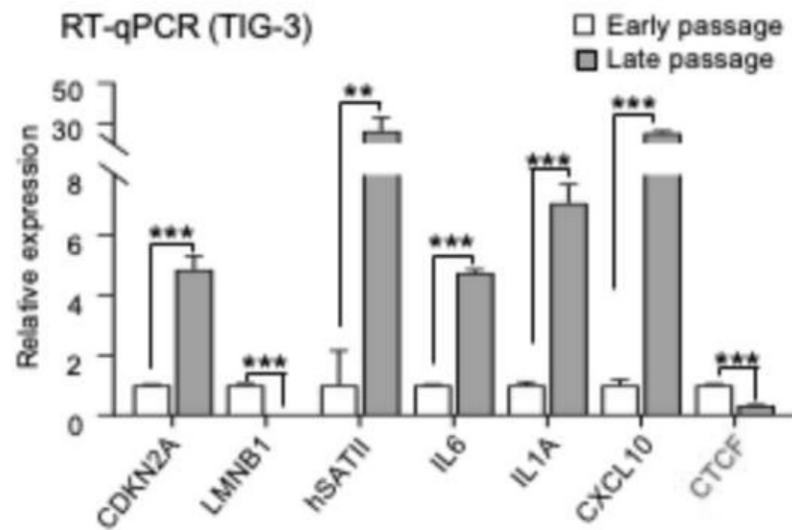
**FIG.4D**



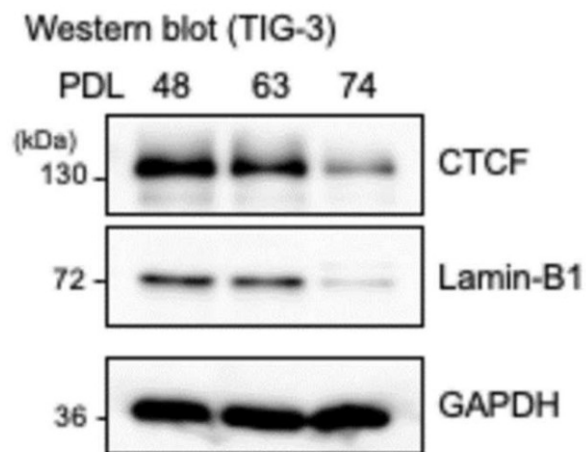
**FIG.5A**



**FIG.5B**



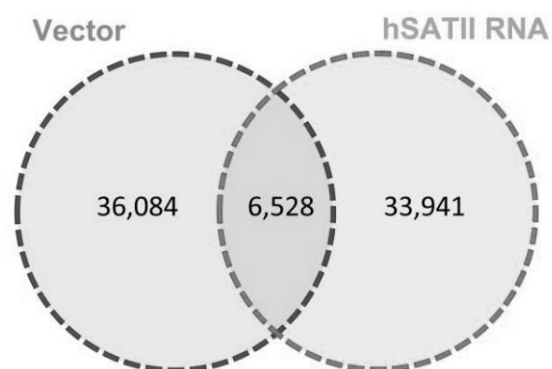
**FIG.5C**



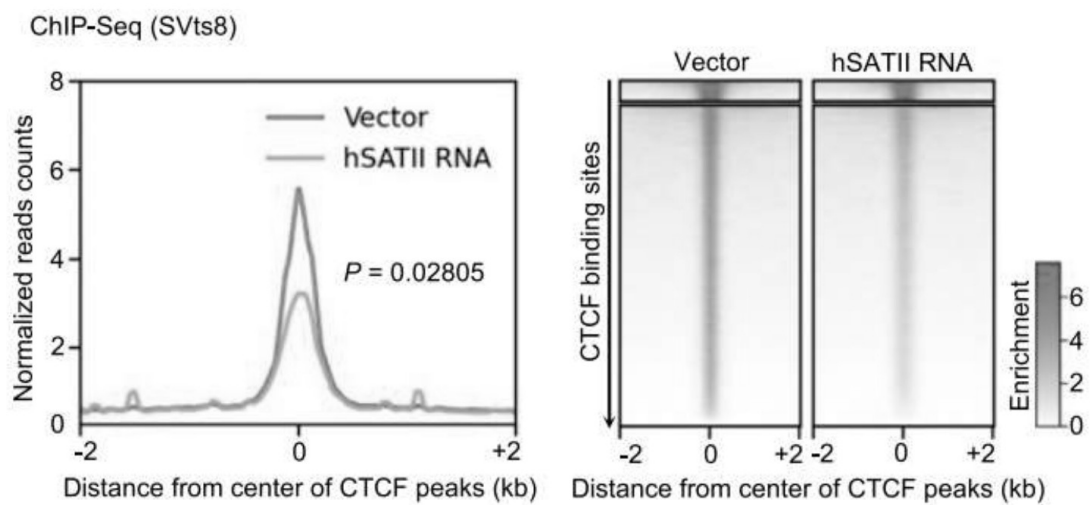
**FIG.5D**

ChIP-Seq (SVts8)

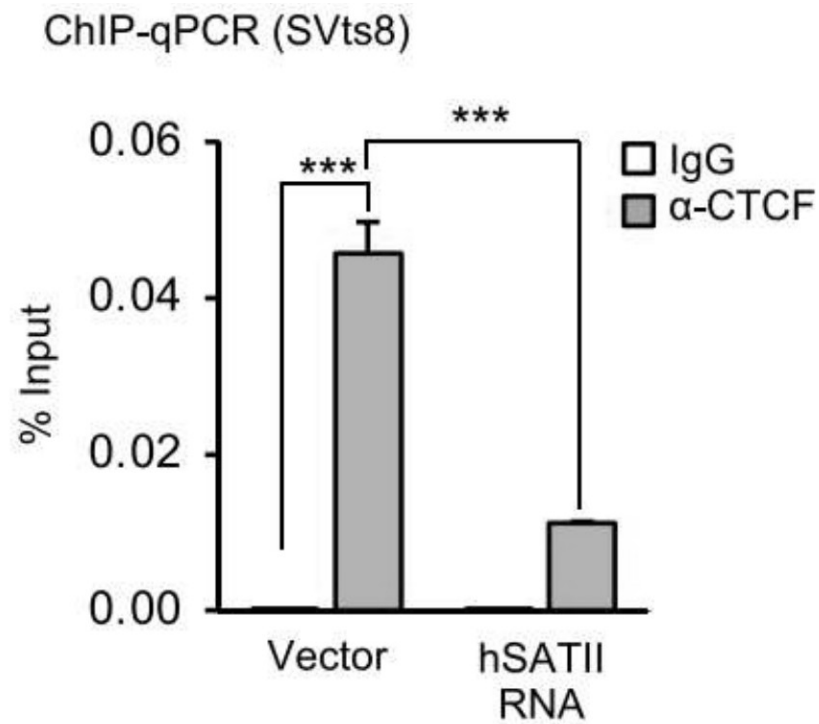
CTCF peaks



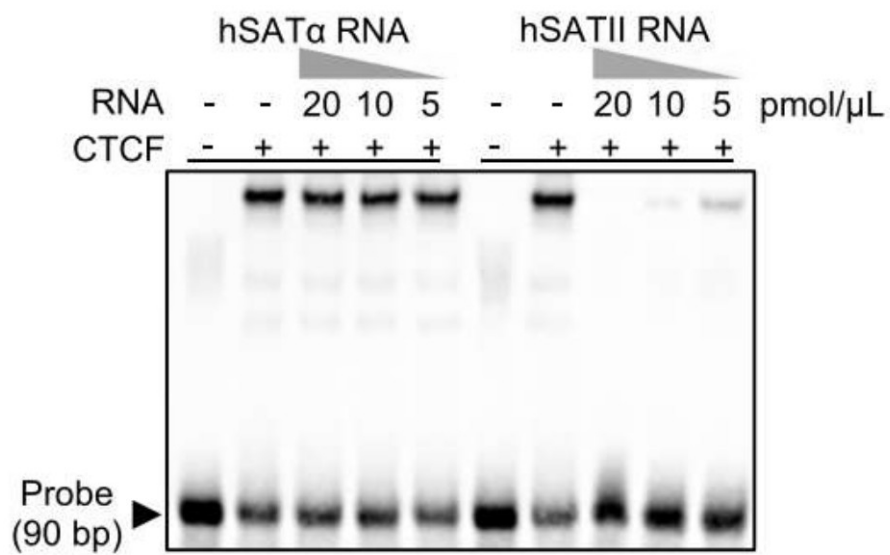
**FIG.6A**



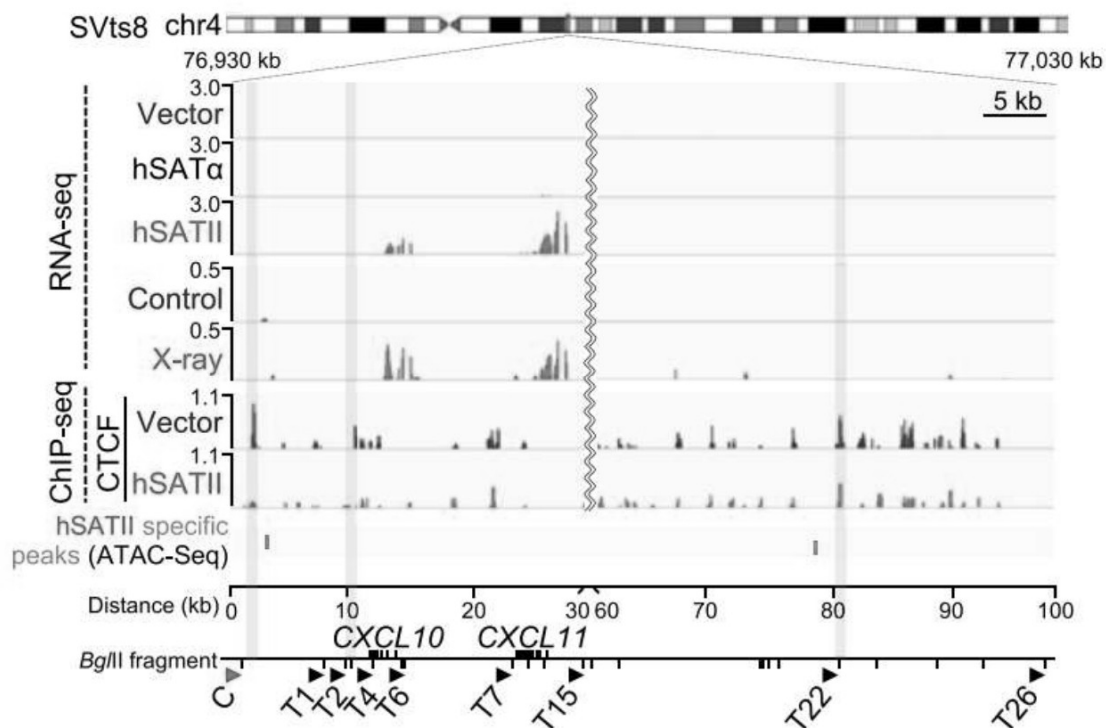
**FIG.6B**



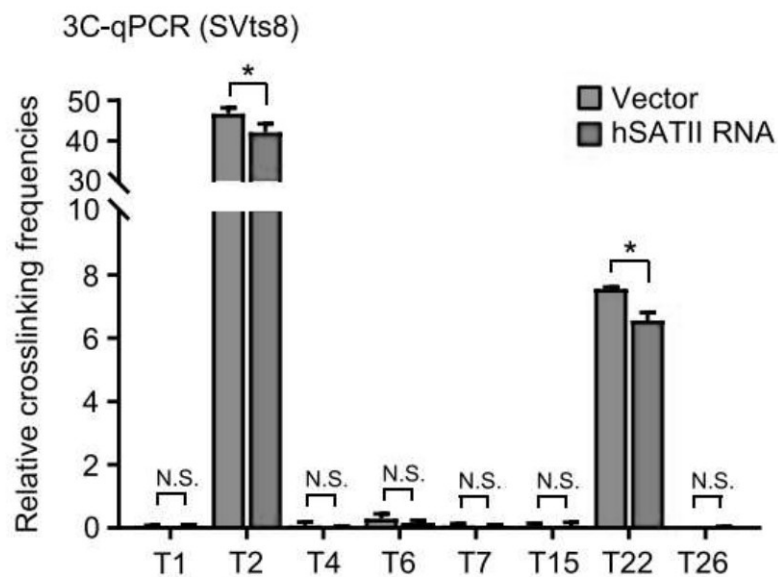
**FIG.6C**



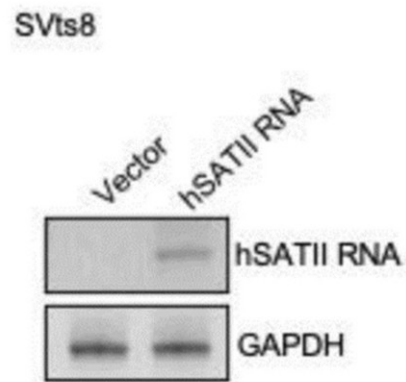
**FIG.6D**



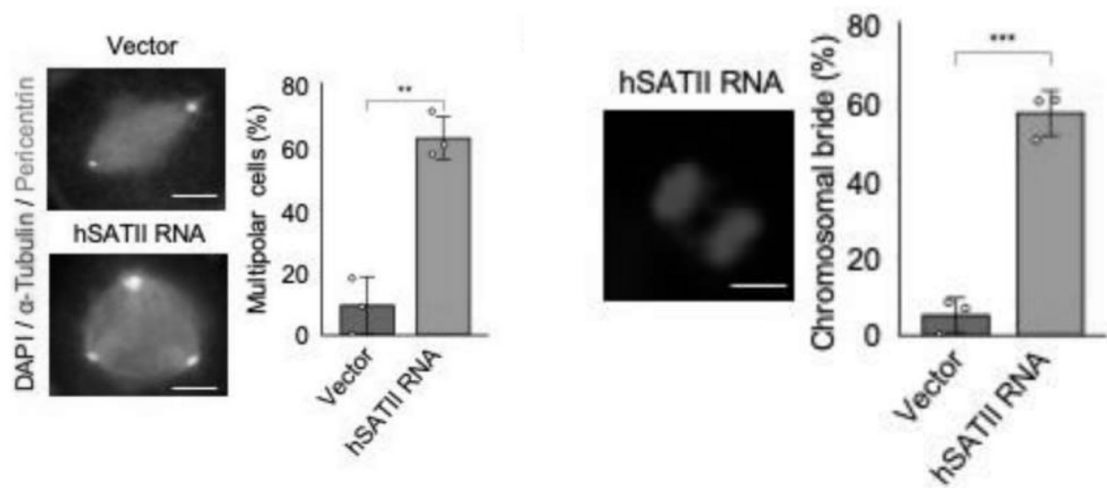
**FIG.6E**



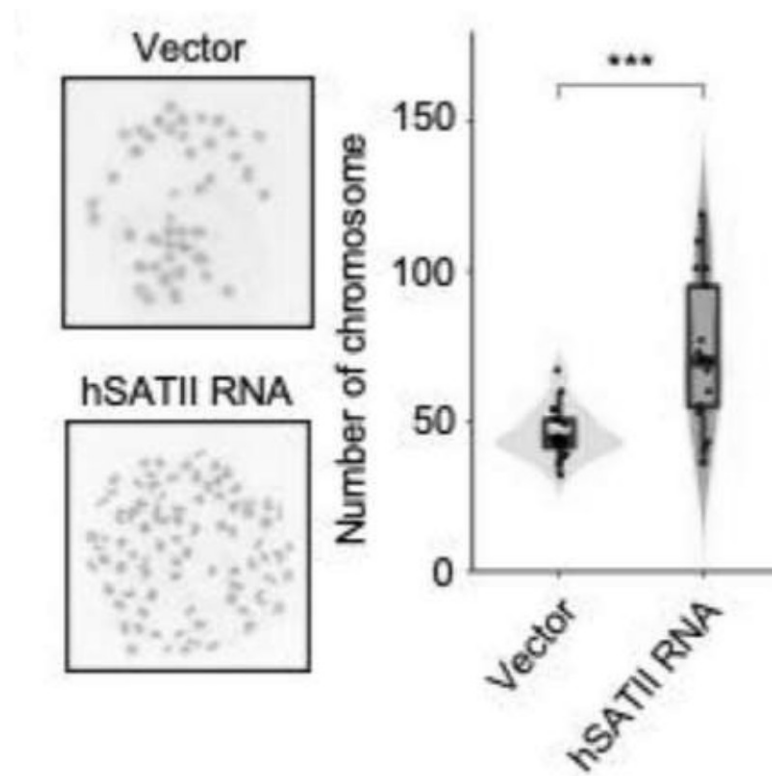
**FIG.6F**



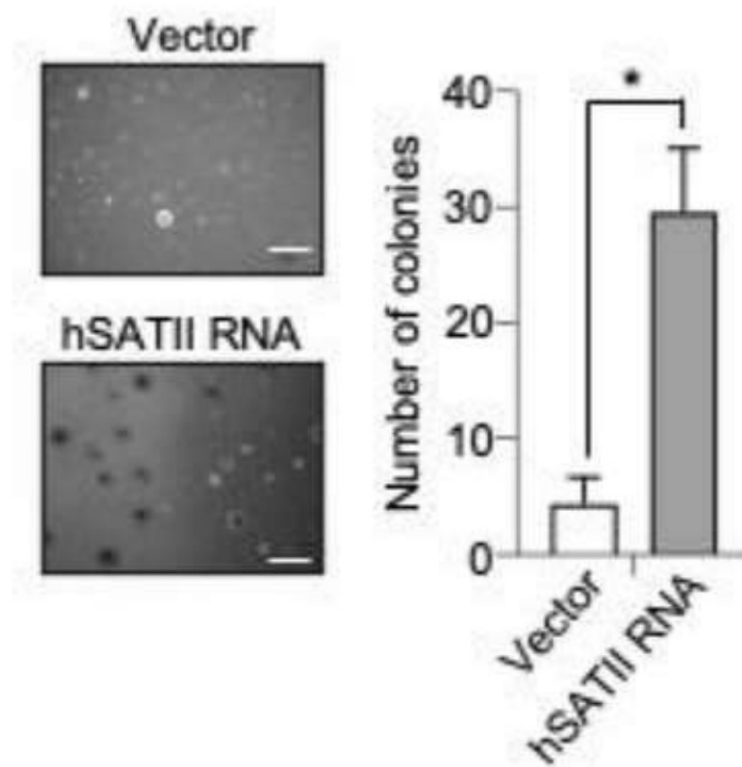
**FIG.7A**



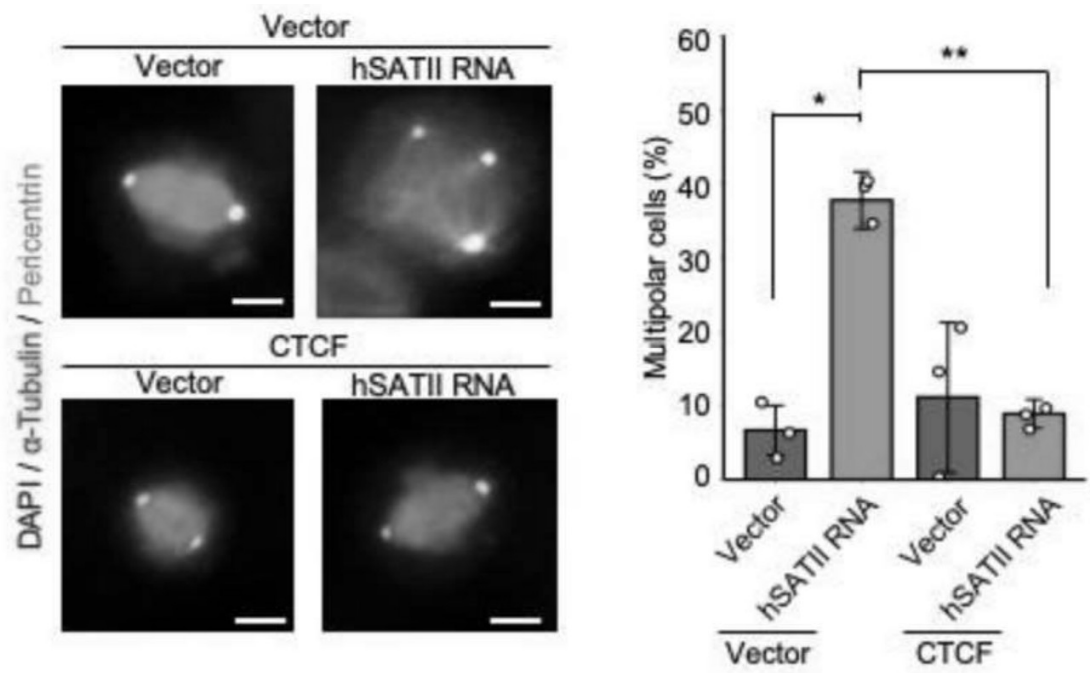
**FIG.7B**



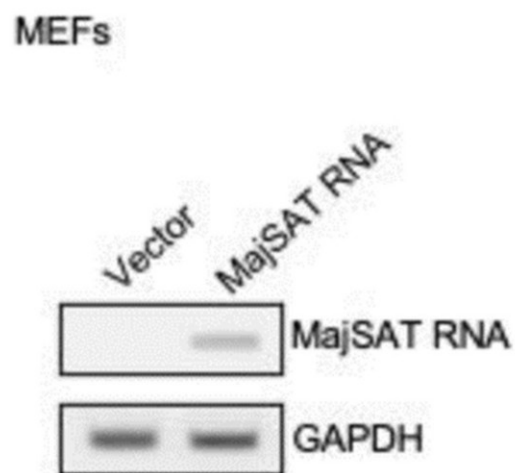
**FIG.7C**



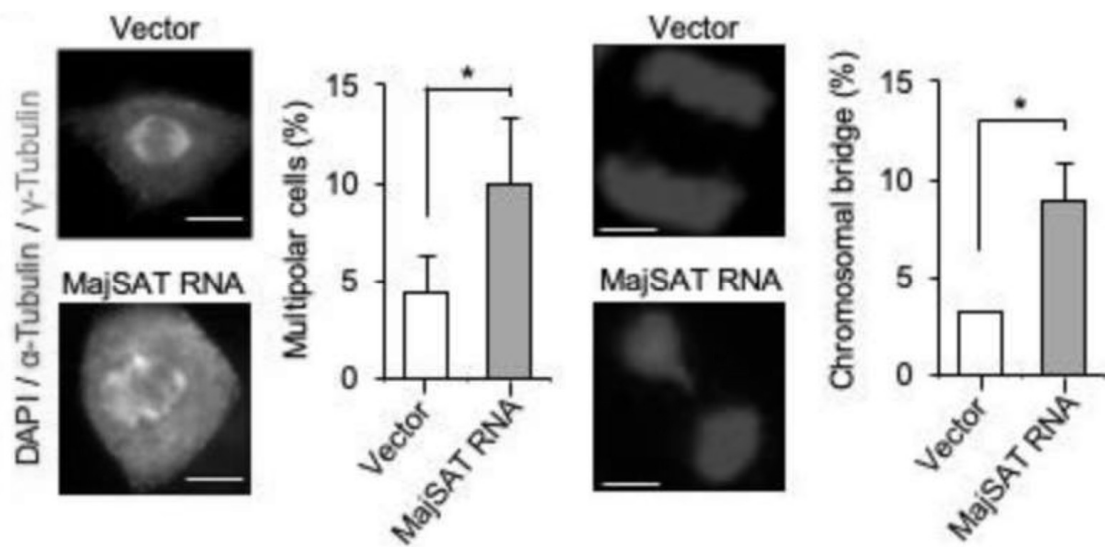
**FIG.7D**



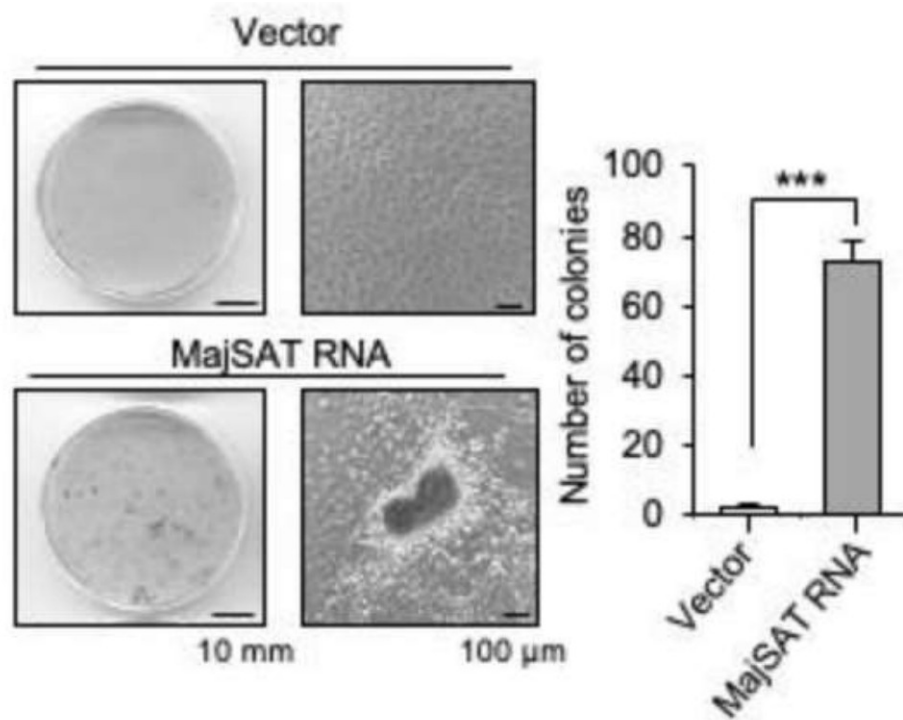
**FIG.7E**



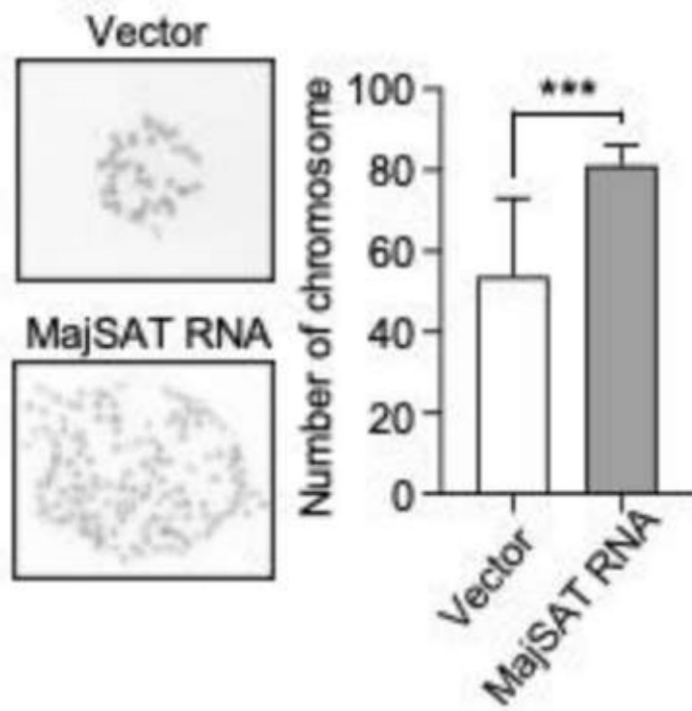
**FIG.8A**



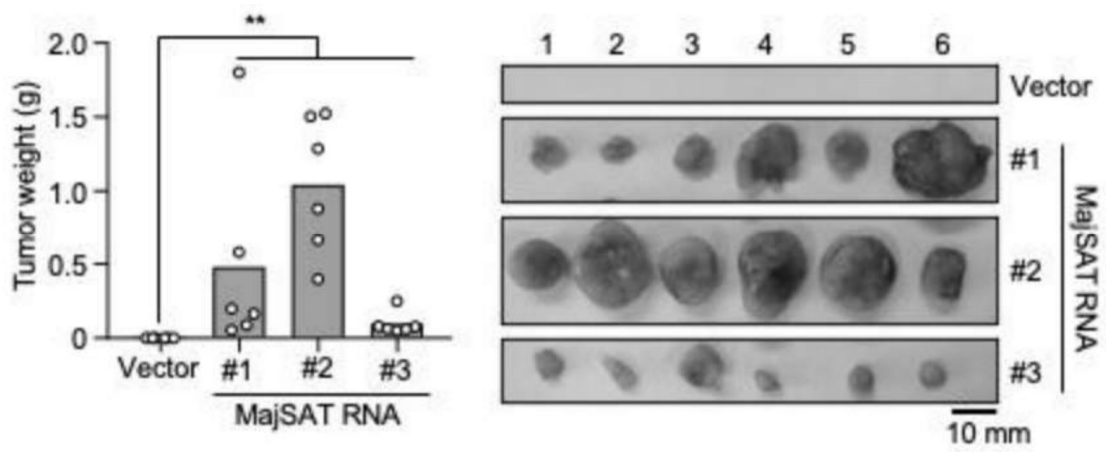
**FIG.8B**



**FIG.8C**



**FIG.8D**



**FIG.8E**

RT-qPCR (small EVs)

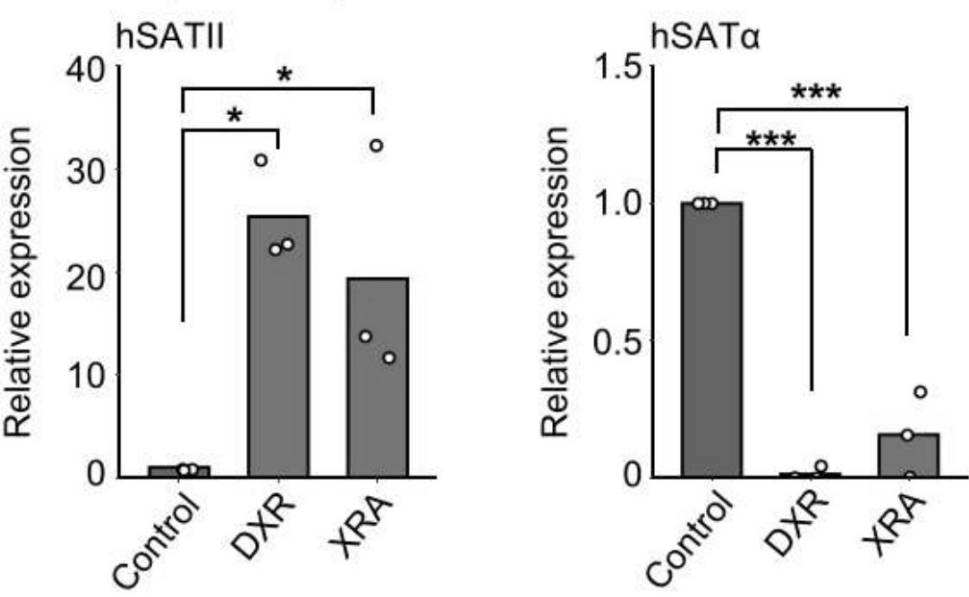


FIG.9A

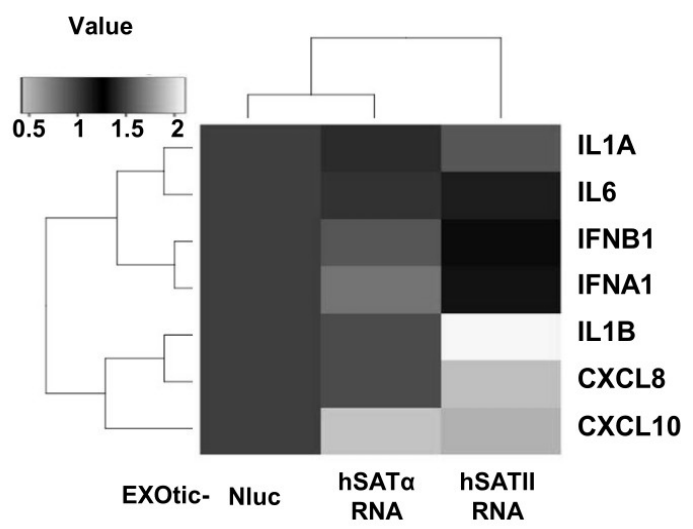
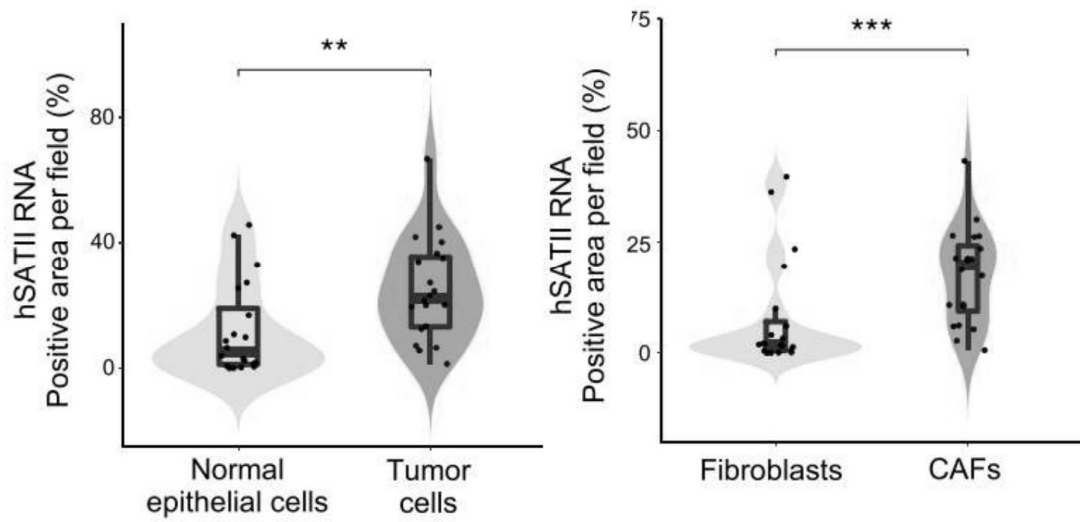
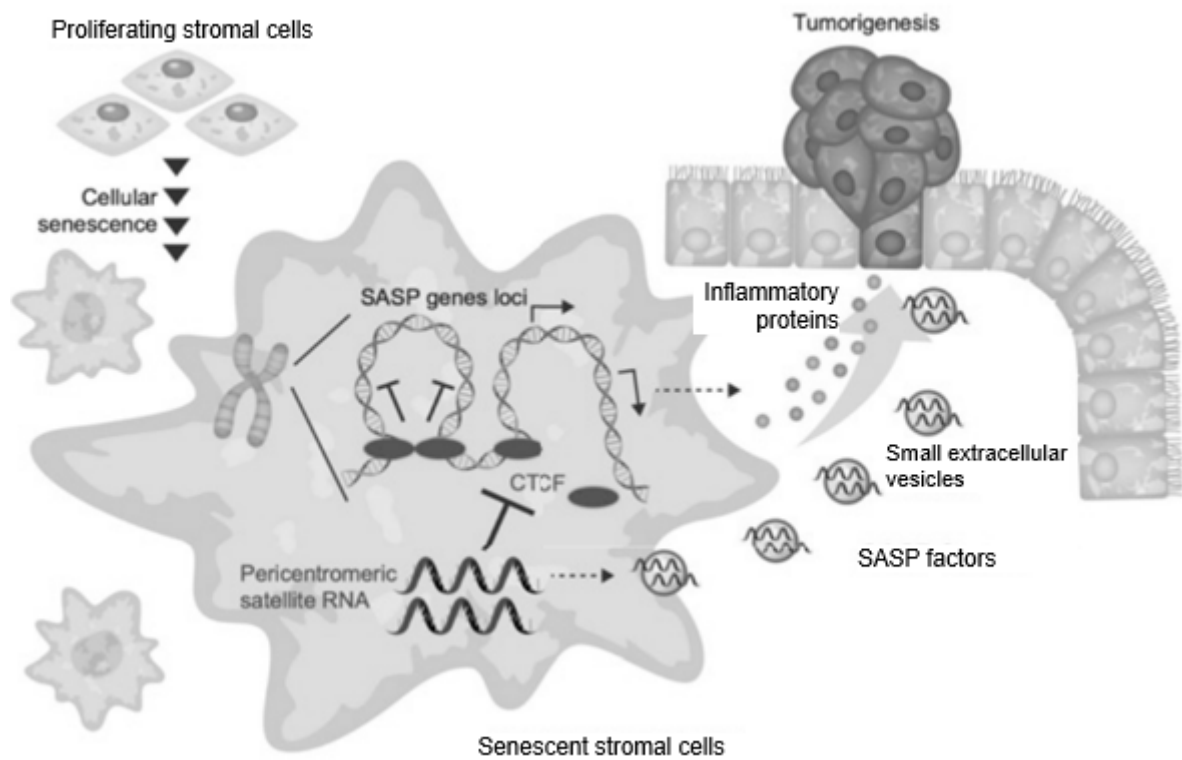


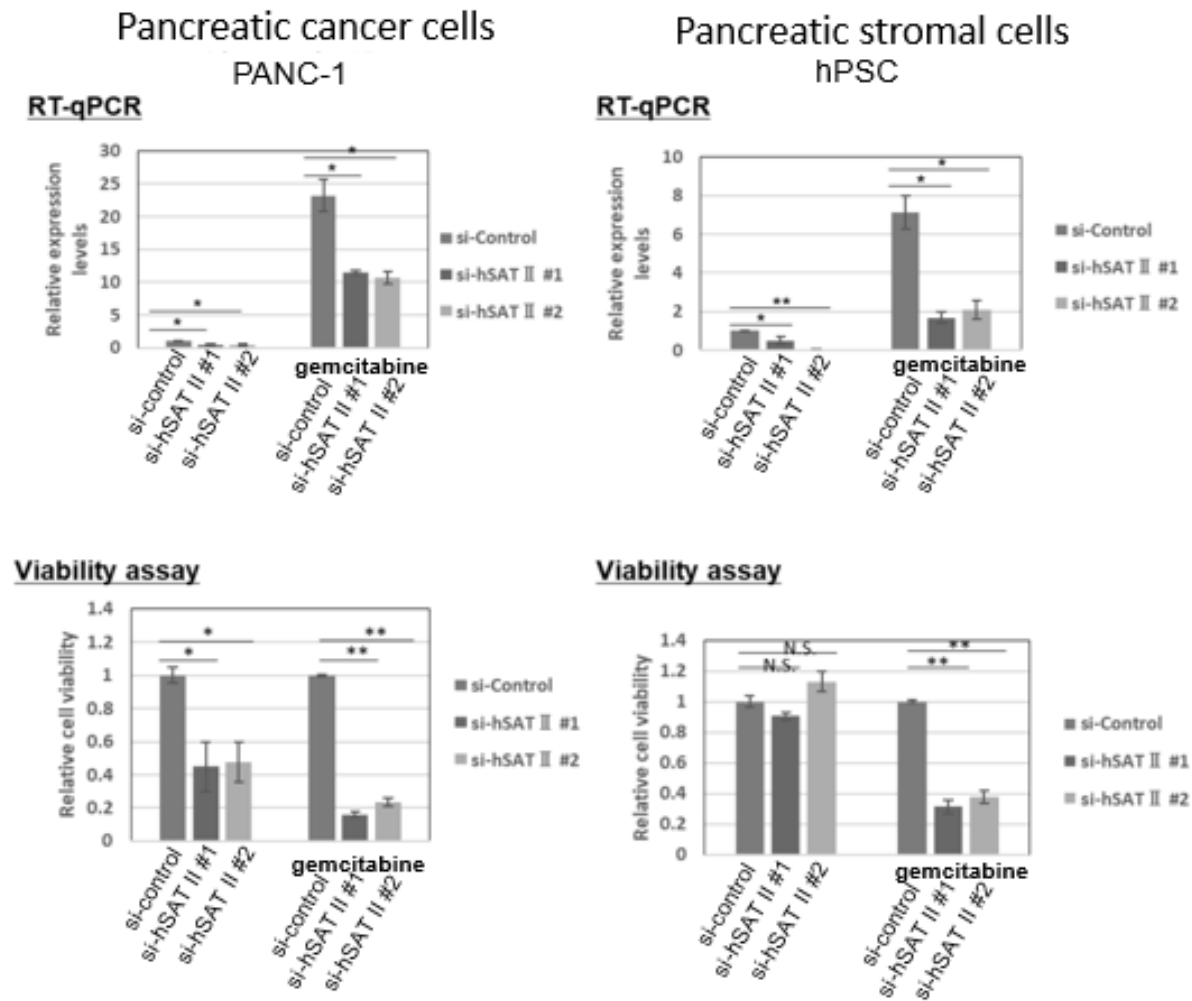
FIG.9B



**FIG.9C**

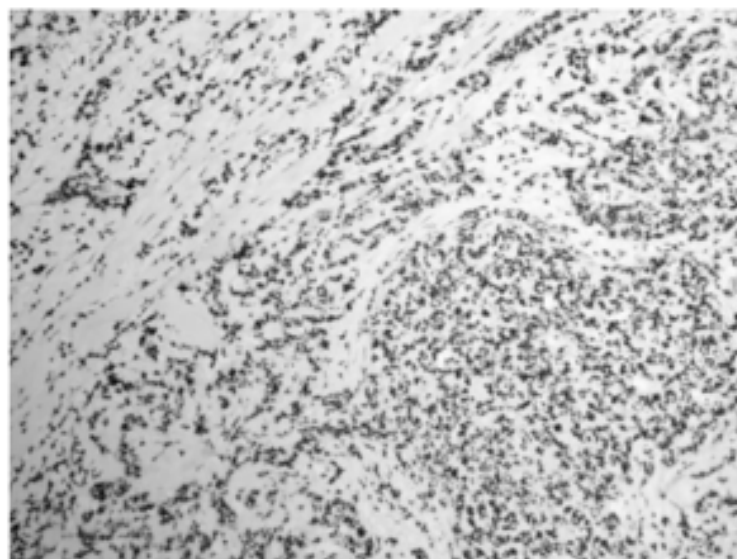


**FIG.9D**

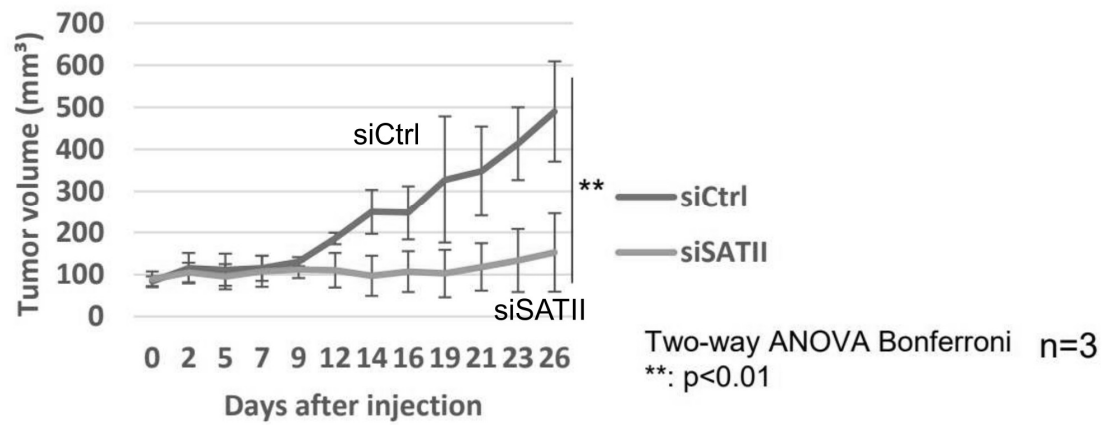


**FIG.10A**

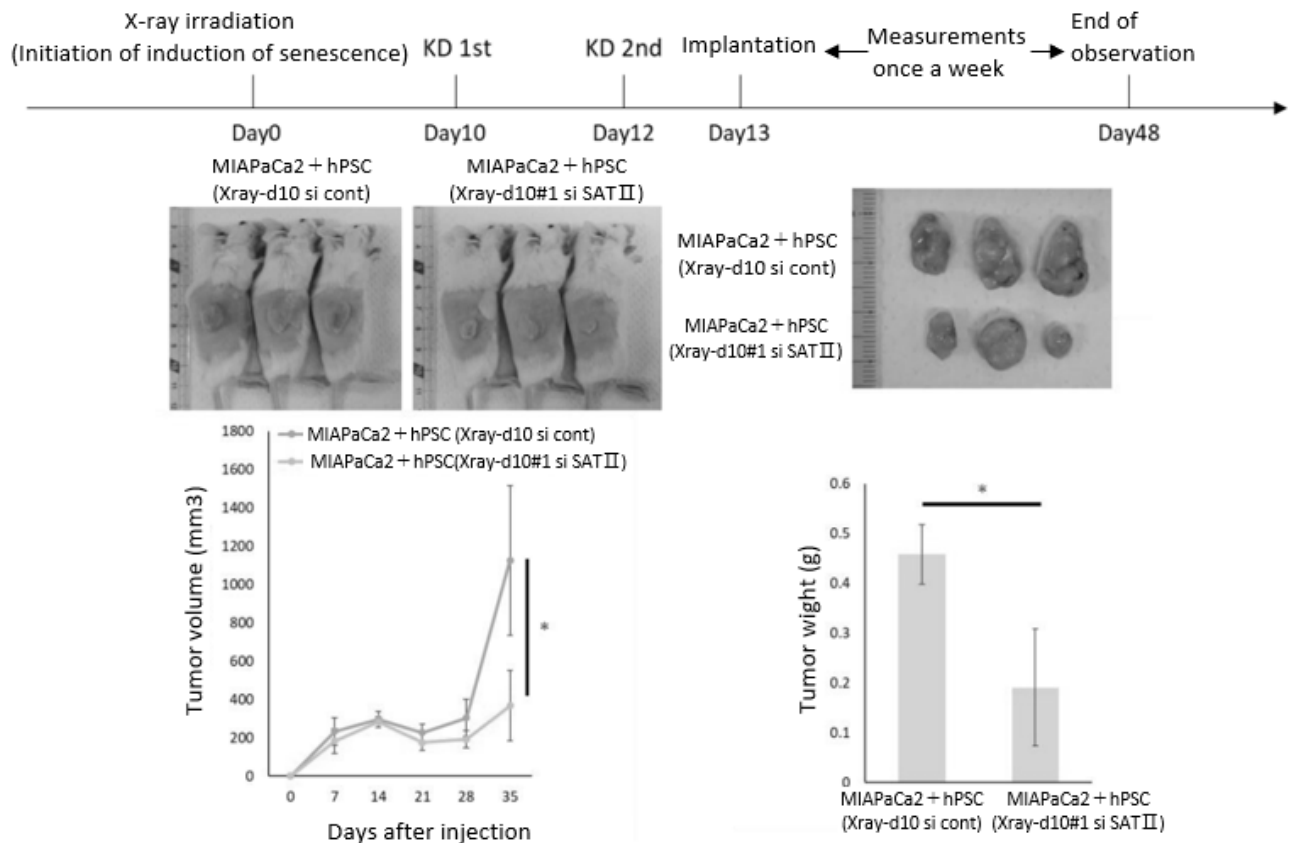
Breast cancer patient specimen



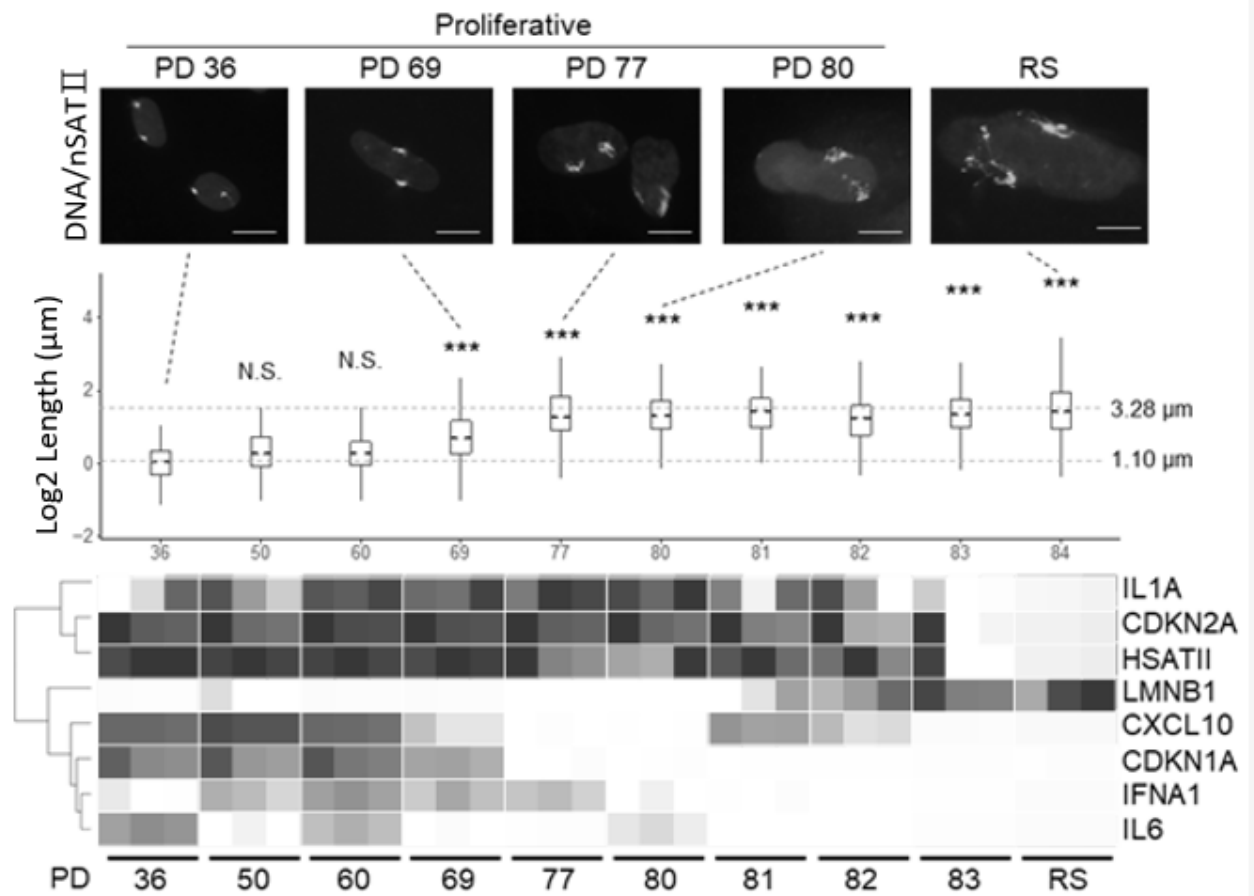
**FIG.10B**



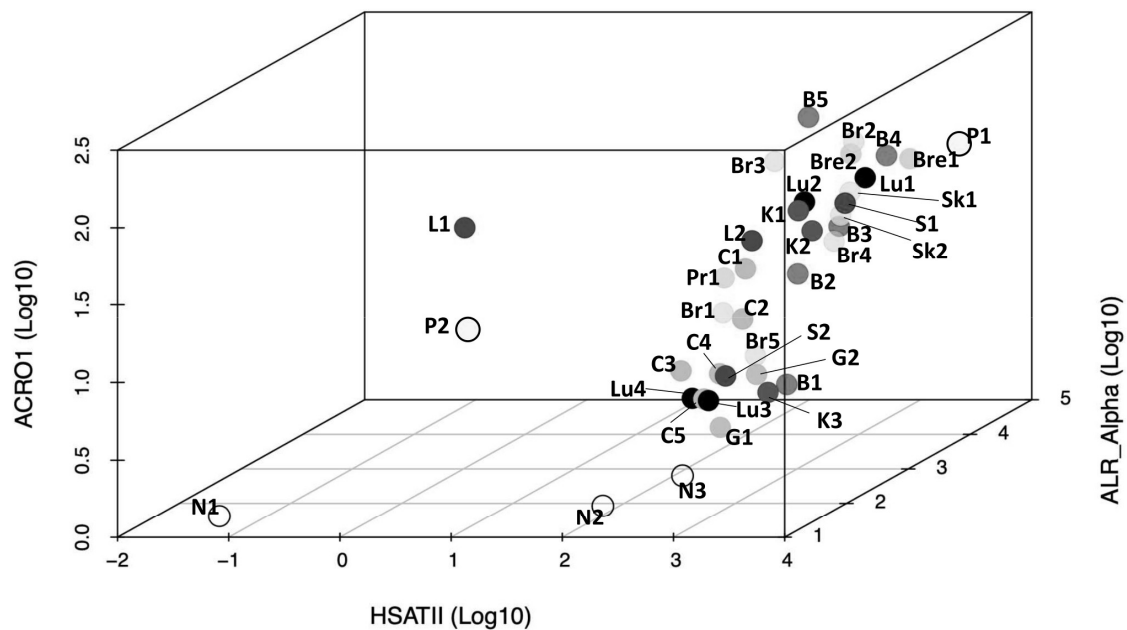
**FIG.11A**



**FIG.11B**



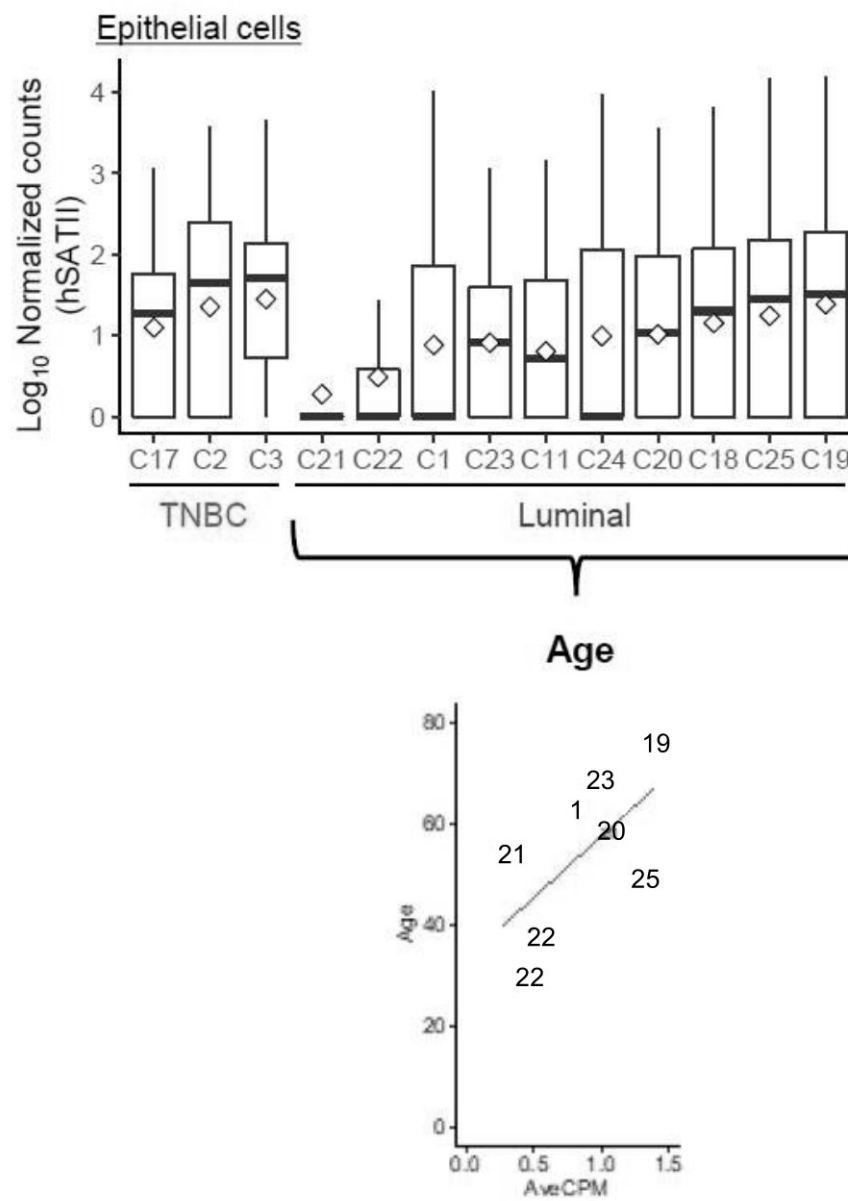
**FIG.12A**



|        |     |                      |          |     |         |          |     |          |
|--------|-----|----------------------|----------|-----|---------|----------|-----|----------|
| Normal | N1  | IMR-90               | Breast   | Br1 | MCF-7   | Liver    | L1  | HuH-7.5  |
|        | N2  | Epidermal Melanocyte |          | Br2 | T47D    |          | L2  | HepG2    |
|        | N3  | BJ                   | Colon    | C1  | SW480   | Lung     | Lu1 | NCI-H460 |
| Blood  | B1  | Jurkat               |          | C2  | HCT116  |          | Lu2 | A549     |
|        | B2  | CMK                  |          | C3  | RKO     |          | Lu3 | NCI-H226 |
|        | B3  | KBM-7                |          | C4  | LoVo    |          | Lu4 | PC-9     |
|        | B4  | NAMALWA              |          | C5  | HT-29   | Pancreas | P1  | Panc1    |
|        | B5  | K562                 | Genitals | G1  | HeLa-S3 |          | P2  | 8988T    |
| Brain  | Br1 | SK-N-MC              |          | G2  | NT2/D1  | Prostate | Pr1 | LNCaP    |
|        | Br2 | SK-N-DZ              | Kidney   | K1  | Caki2   | Sarcoma  | S1  | HT1080   |
|        | Br3 | Daoy                 |          | K2  | G401    |          | S2  | A673     |
|        | Br4 | M059J                |          | K3  | ACHN    | Skin     | Sk1 | SK-MEL-5 |
|        | Br5 | A172                 |          |     |         |          | Sk2 | RPMI7951 |

**FIG.12B**

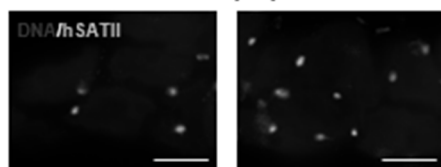
## scATAC-seq



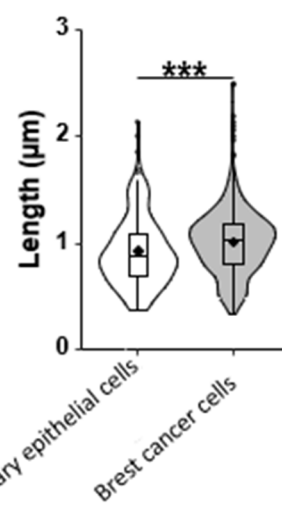
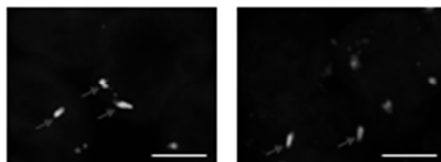
**FIG.12C**

## DNA-FISH

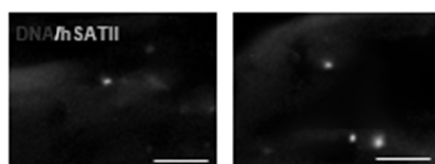
Normal mammary epithelial cells



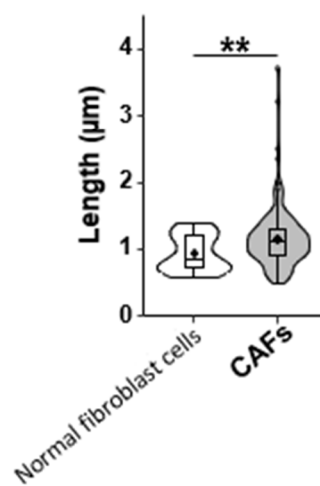
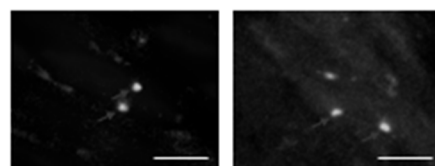
Brest cancer cells



Normal fibroblast cells



CAFs



**FIG.12D**

# scATAC-seq

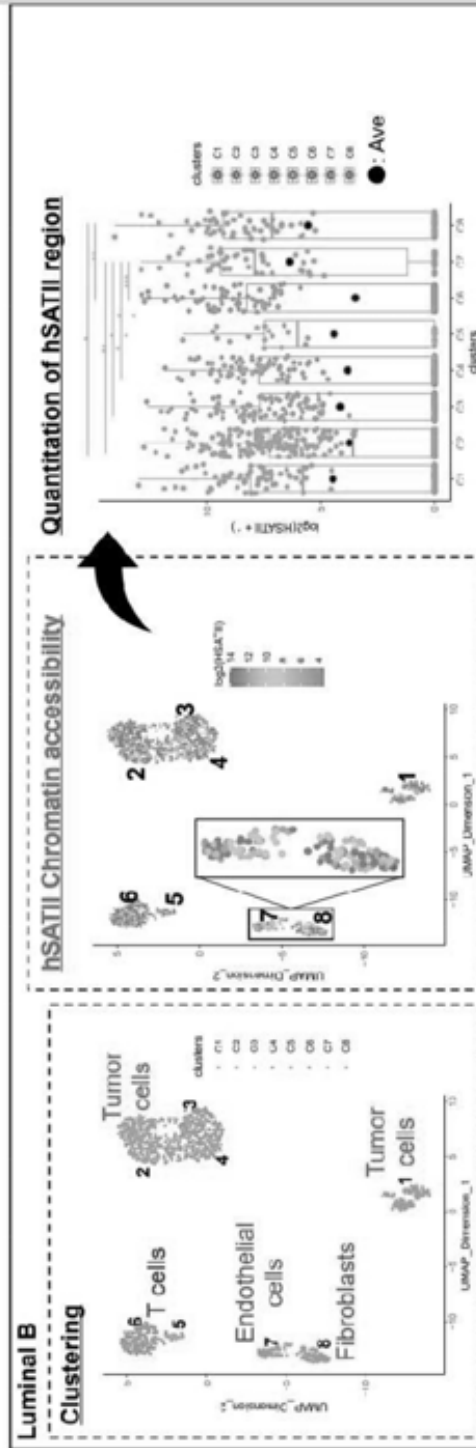
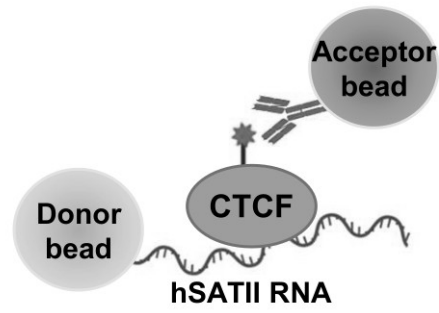
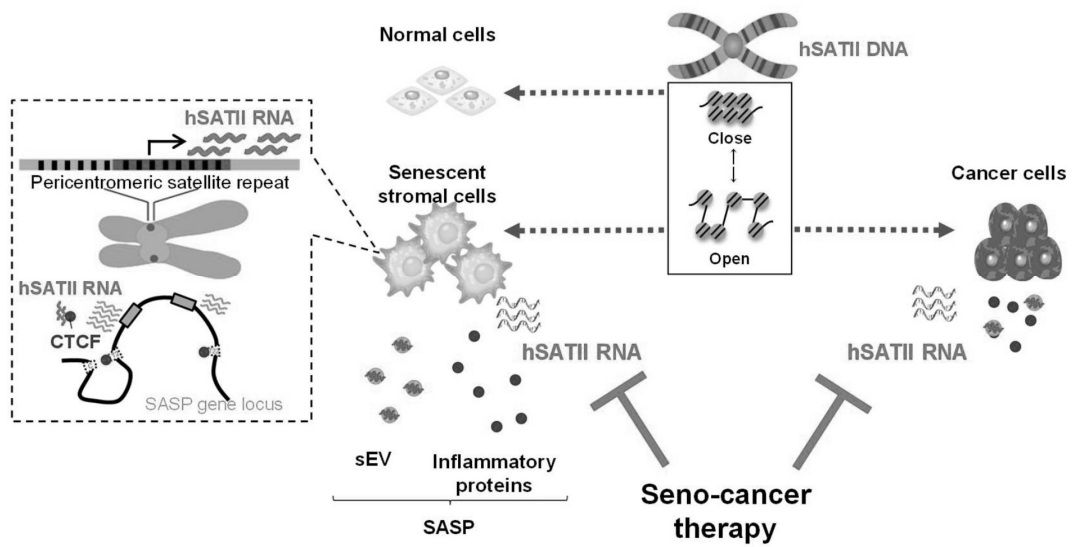


FIG.12E



**FIG.13**



**FIG.14**