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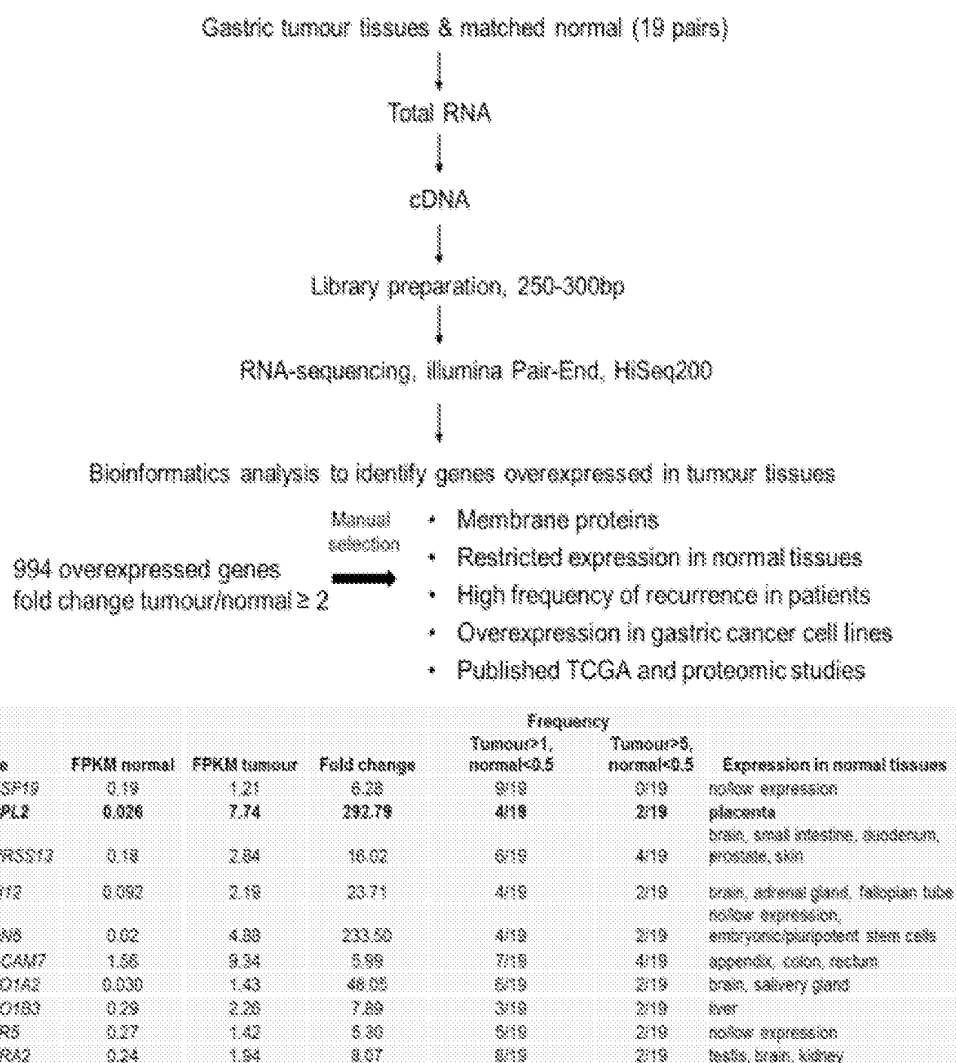
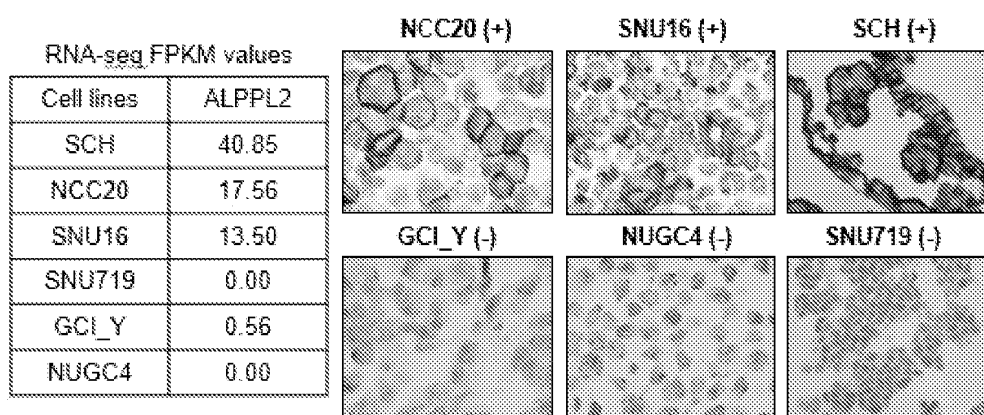


Figure 1

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% positive cells: 1-9% (1); 10-50% (2); >50% (3)  
 Staining intensity: weak (1); moderate (2); strong (3)  
 Score = % positive cells x staining intensity

| Score | Number of cases |
|-------|-----------------|
| 0     | 166 (85%)       |
| 1 – 2 | 9               |
| 3 – 6 | 18              |
| 9     | 5               |
| 1 – 9 | 32 (15%)        |

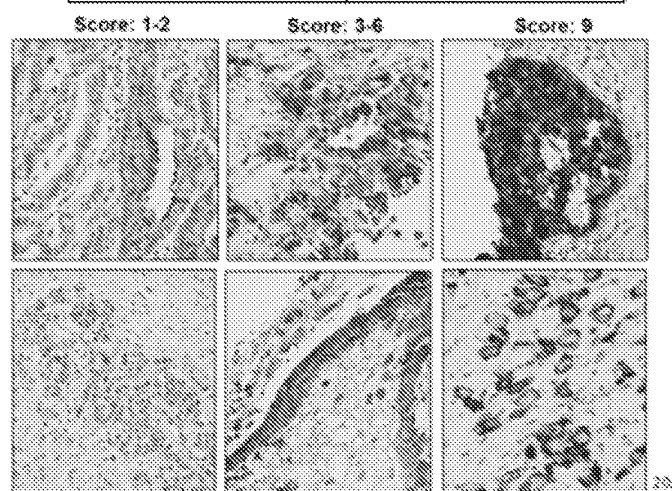
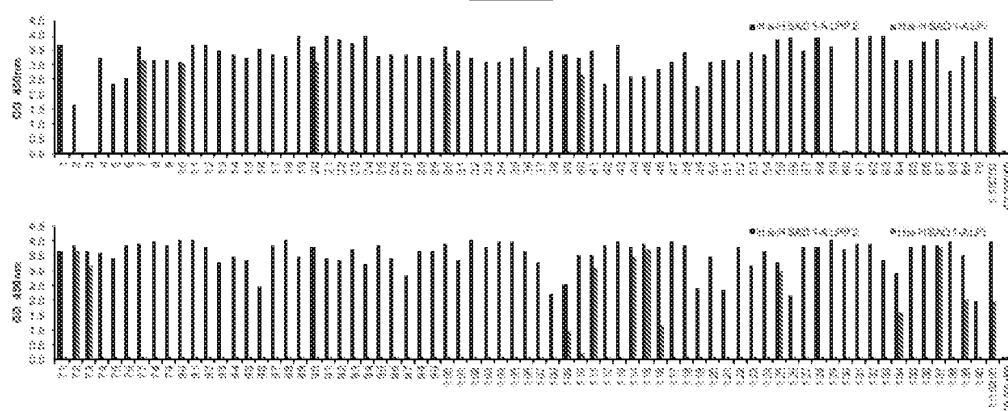
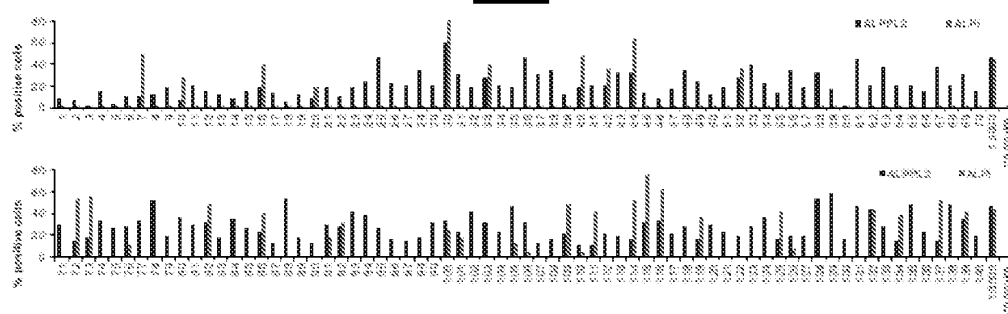


Figure 2

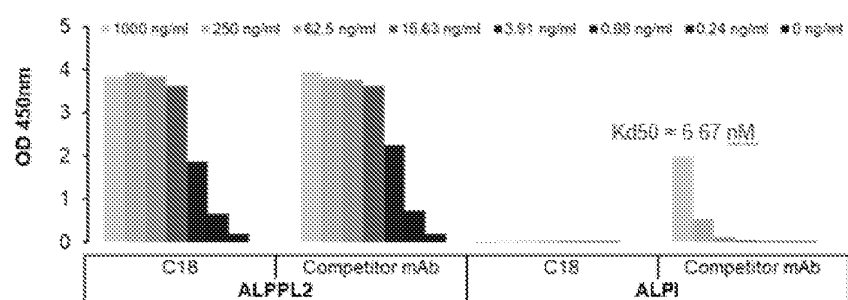
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**ELISA****FACS**

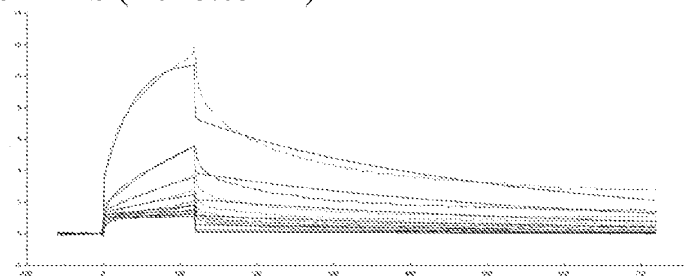
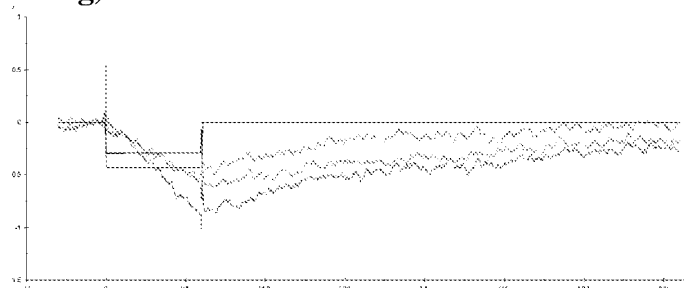
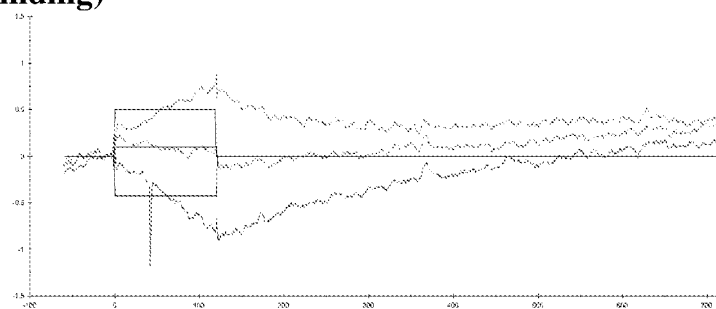
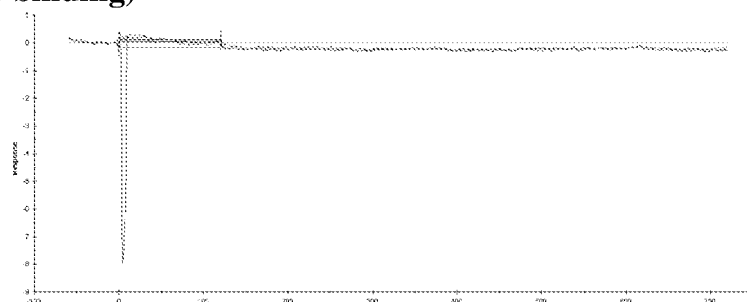
| Clones | Kd(nM) | R <sup>2</sup> |
|--------|--------|----------------|
| C4     | 0.001  | 100            |
| C129   | 0.001  | 0.9984         |
| C130   | 0.001  | 0.92864        |
| C136   | 0.1    | 99.9           |
| C10    | 0.15   | 99.9           |
| C29    | 0.2    | 99.7           |
| C138   | 0.2    | 99.8           |
| C31    | 0.4    | 99.5           |
| C102   | 0.5    | 0.99754        |
| C15    | 0.6    | 0.99577        |
| C12    | 0.8    | 0.98874        |
| C133   | 1      | 0.92345        |
| C18    | 1.4    | 0.97532        |
| C25    | 1.4    | 0.97532        |
| C21    | 1.4    | 0.93144        |
| C36    | 1.6    | 98.5           |
| C124   | 1.6    | 0.91724        |
| C19    | 1.69   | 0.92002        |
| C127   | 1.7    | 0.99172        |
| C39    | 2      | 0.88134        |
| C35    | 4.1    | 0.92625        |
| C131   | 8      | 0.99866        |

**Figure 3**

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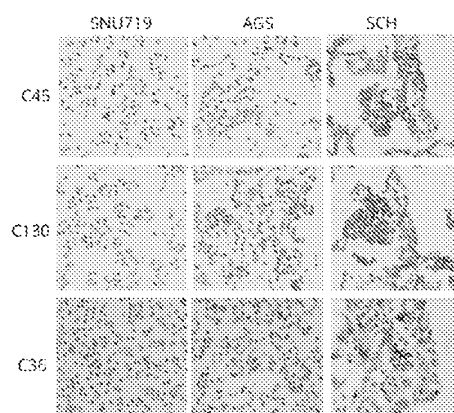
**ELISA (reactivity against ALPPL2 and ALPI)****Figure 4 (continued)**

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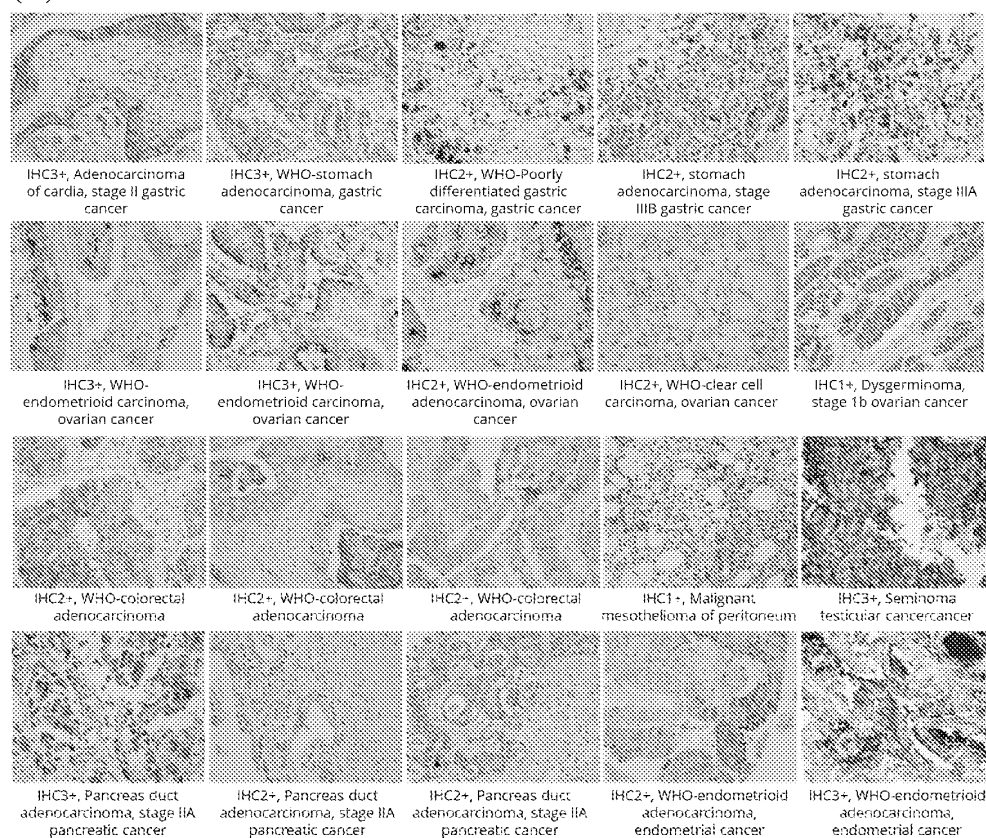
**SPR (reactivity against ALPI)****Competitor mAb (K<sub>d</sub>=3.63nM)****C12 (no binding)****C4 (no binding)****C18 (no binding)****Figure 4 (end)**

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(A)



(B)



Representative images taken with OLYMPUS bright field microscope with 40X magnification under same light intensity

H Score =  $[(1 \times (\% \text{ A cells } 1+)) + 2 \times (\% \text{ B cells } 2+)) + 3 \times (\% \text{ C cells } 3+)]$  and A, B, C are the % cells (to nearest 5%) at intensity 1, 2, 3 respectively; H-Score: 0-100 = IHC1+, 101-200 = IHC2+, 201-300 = IHC3+

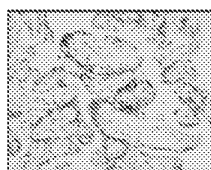
**Figure 5 (Continued)**

(C)

| Anatomic site      | Result          | Number of cores | H-Score       | IHC          |
|--------------------|-----------------|-----------------|---------------|--------------|
| Adrenal gland      | Negative        | 3               |               |              |
| Bladder            | Negative        | 3               |               |              |
| Bone marrow        | Negative        | 1               |               |              |
| Eye                | Negative        | 3               |               |              |
| Breast             | Negative        | 3               |               |              |
| Cerebellum         | Negative        | 3               |               |              |
| Cerebral cortex    | Negative        | 2               |               |              |
| Fallopian tube     | Negative        | 3               |               |              |
| GI-Esophagus       | Negative        | 3               |               |              |
| GI-Stomach         | Negative        | 3               |               |              |
| GI-Small intestine | Negative        | 3               |               |              |
| GI-Colon           | Negative        | 3               |               |              |
| GI-Rectum          | Negative        | 3               |               |              |
| Heart              | Negative        | 3               |               |              |
| Kidney             | Negative        | 6               |               |              |
| Liver              | Negative        | 3               |               |              |
| Lung               | Negative        | 2               |               |              |
| Ovary              | Negative        | 3               |               |              |
| Pancreas           | Negative        | 3               |               |              |
| Parathyroid        | Negative        | 1               |               |              |
| Pituitary gland    | Negative        | 2               |               |              |
| <b>Placenta</b>    | <b>Positive</b> | 3               | <b>75-195</b> | <b>IHC2+</b> |
| Prostate           | Negative        | 3               |               |              |
| Skin               | Negative        | 2               |               |              |
| Spinal cord        | Negative        | 2               |               |              |
| Spleen             | Negative        | 2               |               |              |
| Striated muscle    | Negative        | 3               |               |              |
| Testis             | Negative        | 3               |               |              |
| Thymus             | Negative        | 3               |               |              |
| Thyroid            | Negative        | 3               |               |              |
| Tonsil             | Negative        | 3               |               |              |
| Ureter             | Negative        | 3               |               |              |
| Uterus-cervix      | Negative        | 3               |               |              |
| Uterus-endometrium | Negative        | 3               |               |              |



IHC2+, placenta tissues



IHC2+, placenta tissues

**Figure 5 (End)**

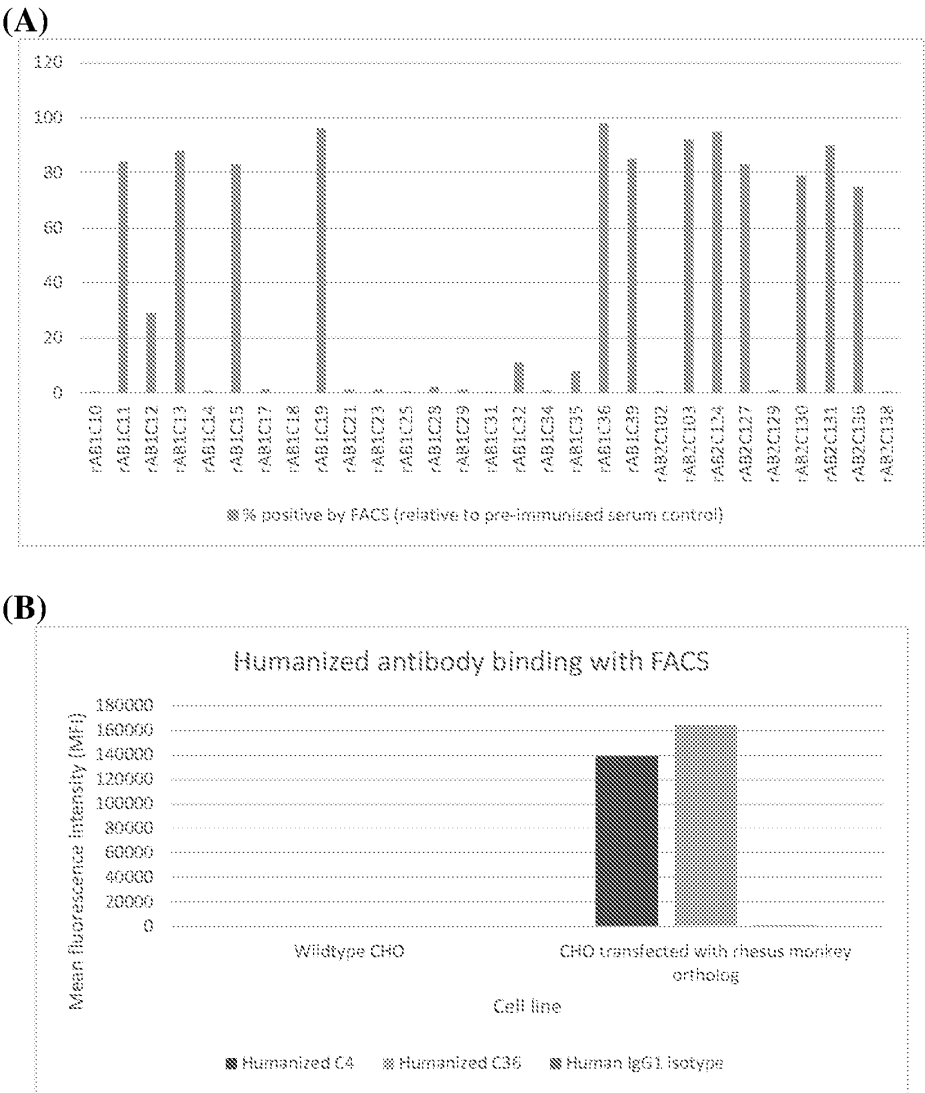
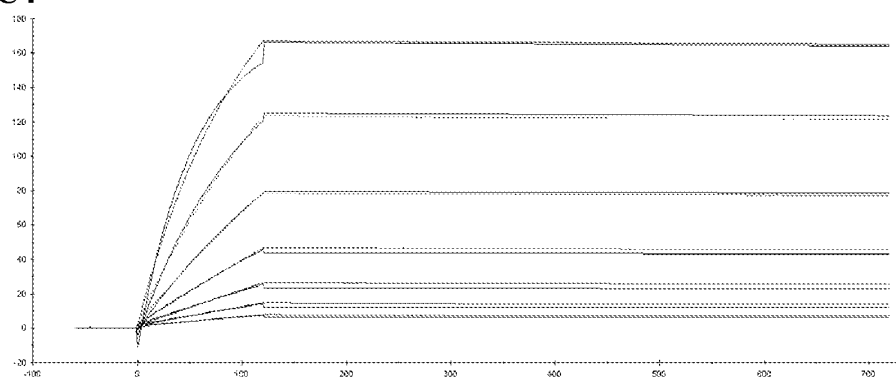


Figure 6

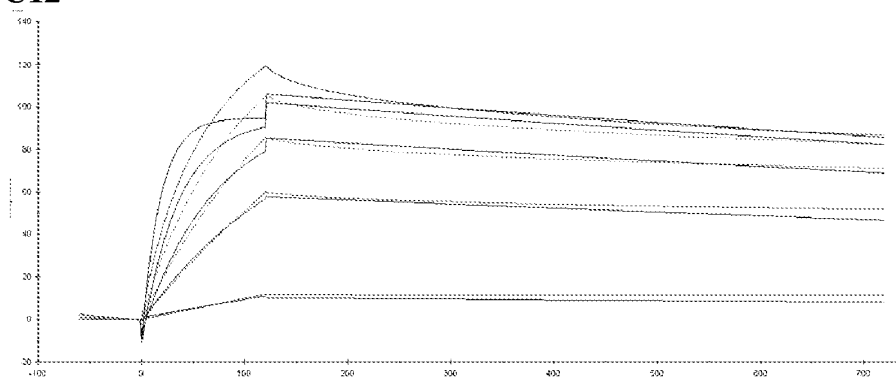
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SPR (ALPPL2)

C4



C12



C18

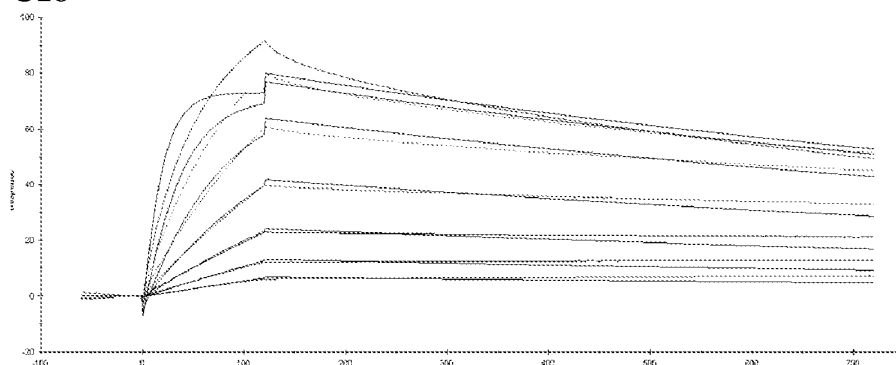
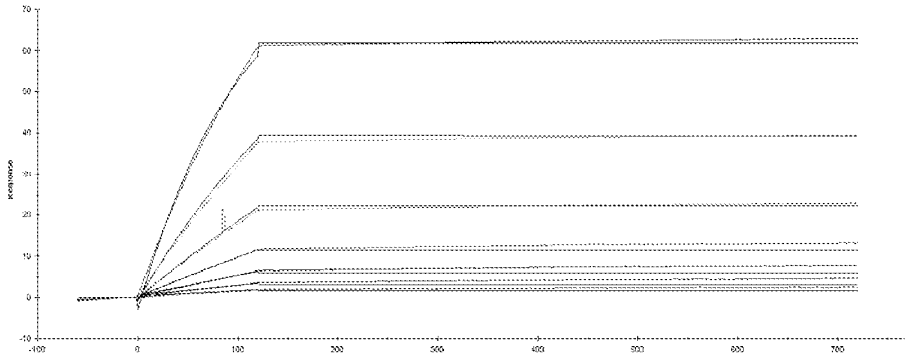


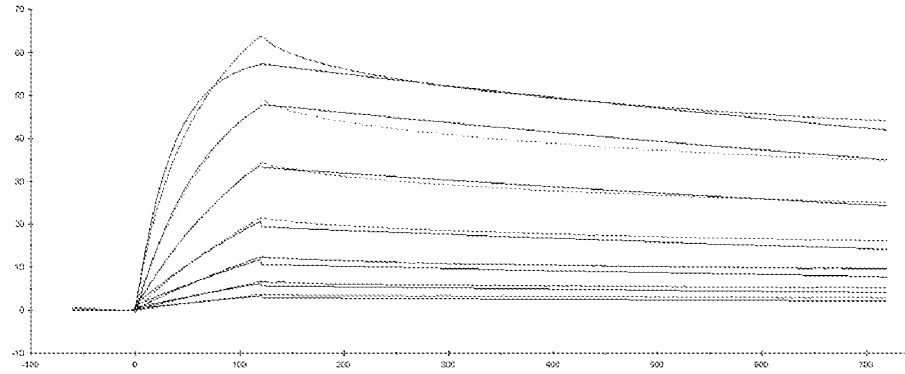
Figure 7 (continued)

SPR (ALPP)

C4



C12



C18

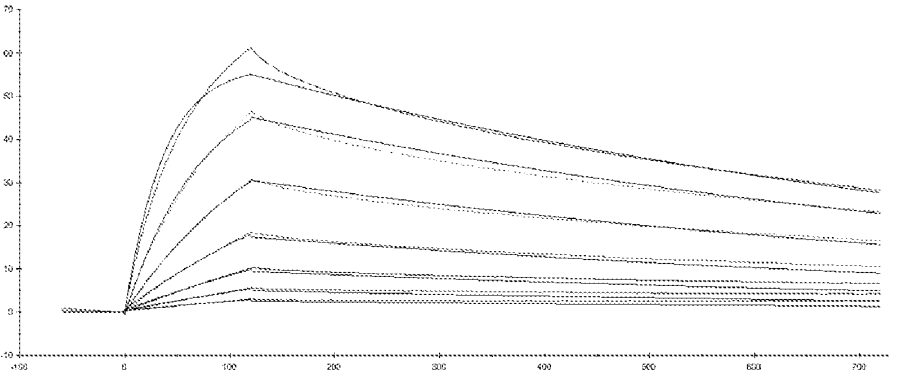


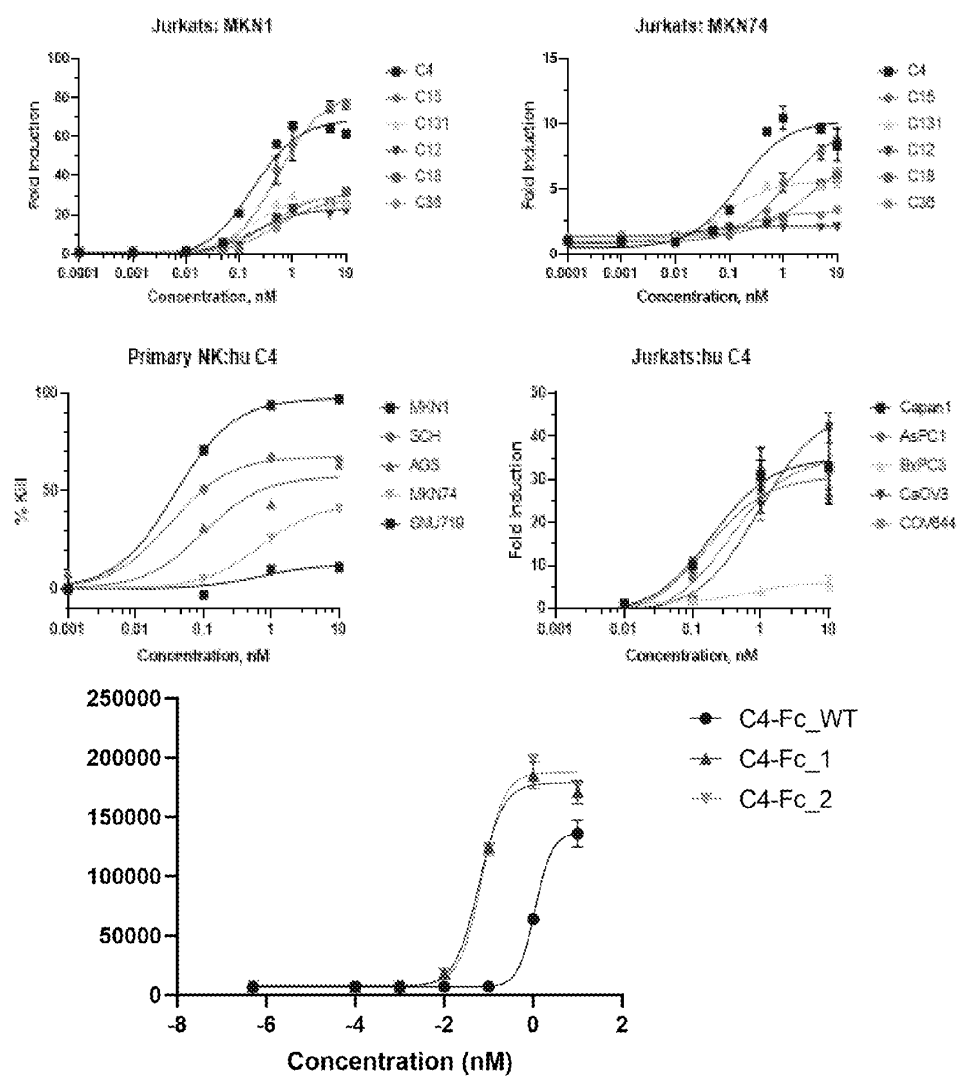
Figure 7 (continued)

**Affinity ( $K_D$ ) measurements**

|            | <b>ALPP2</b>  | <b>ALPP</b>   |
|------------|---------------|---------------|
| <b>C4</b>  | <b>14 pM</b>  | <b>0.1 pM</b> |
| <b>C12</b> | <b>80 pM</b>  | <b>235 pM</b> |
| <b>C18</b> | <b>144 pM</b> | <b>526pM</b>  |

**Figure 7 (end)**

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Fc-1 mutations (S239D, A330L, I332E)  
 Fc-2 mutations (F243L, R292P, Y300L, V305I, P396L)

Figure 8

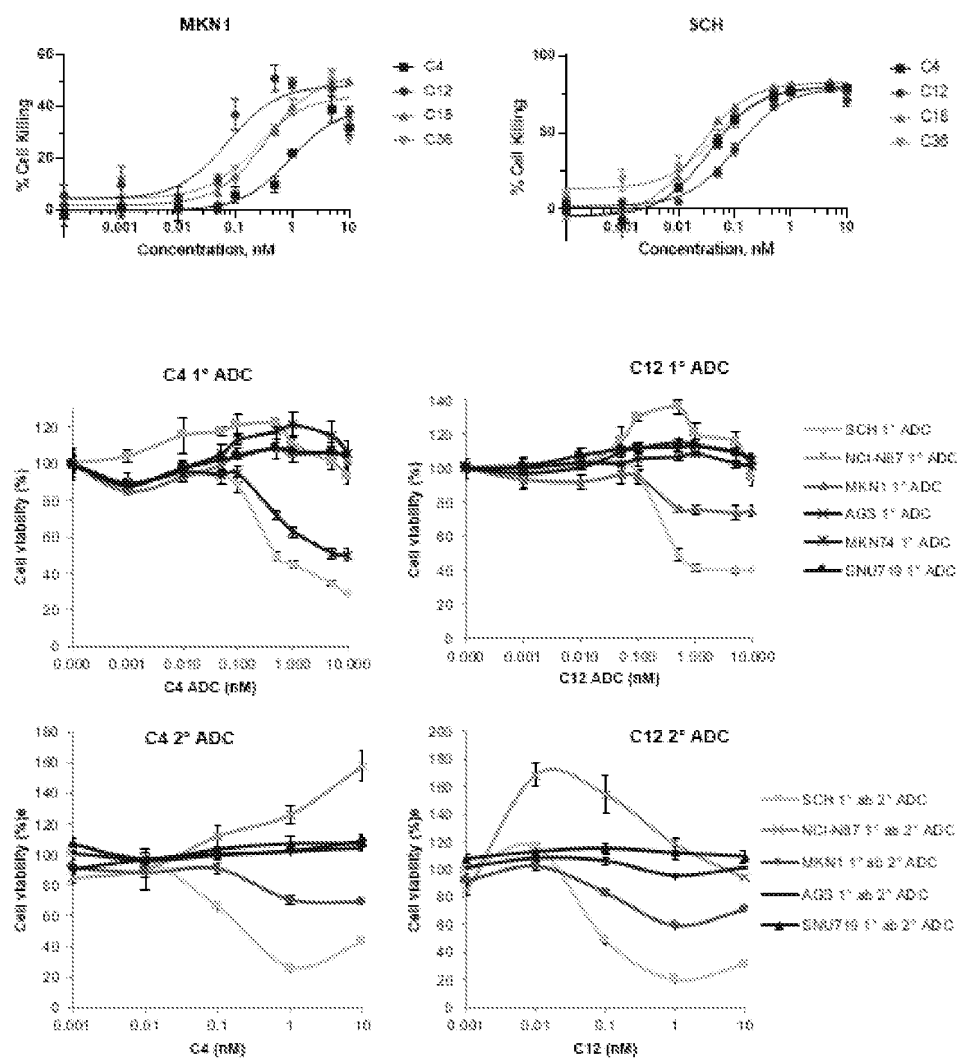


Figure 9

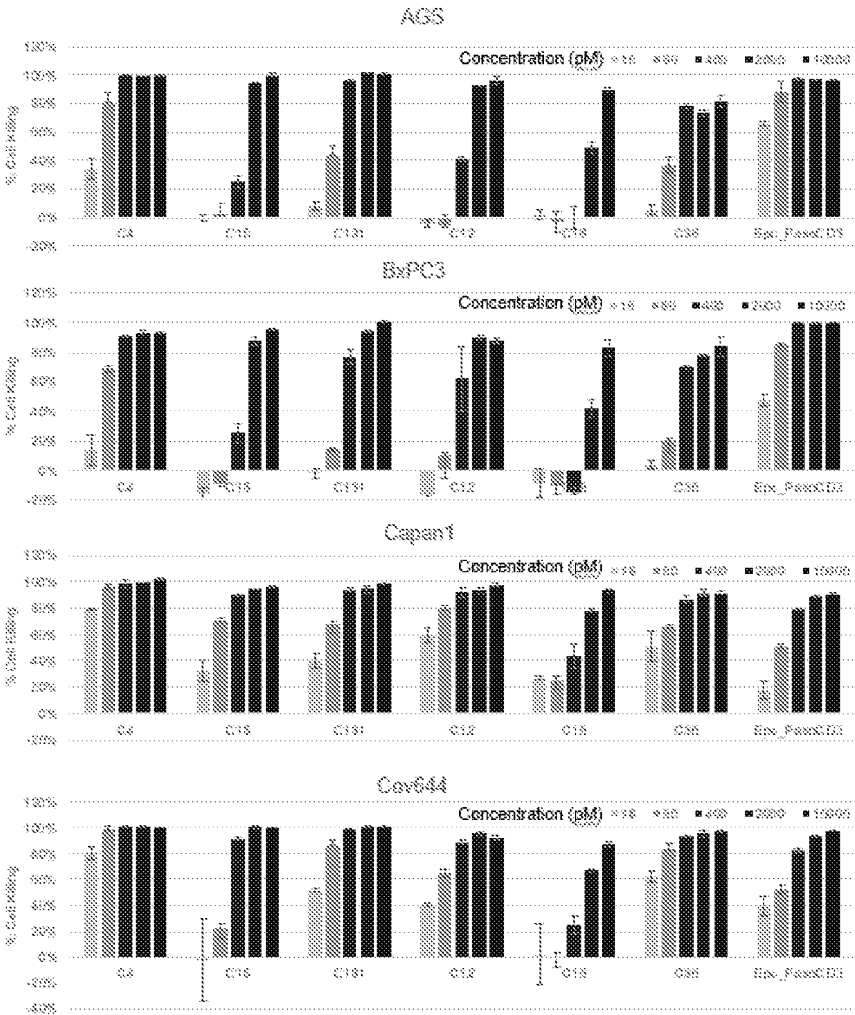


Figure 10

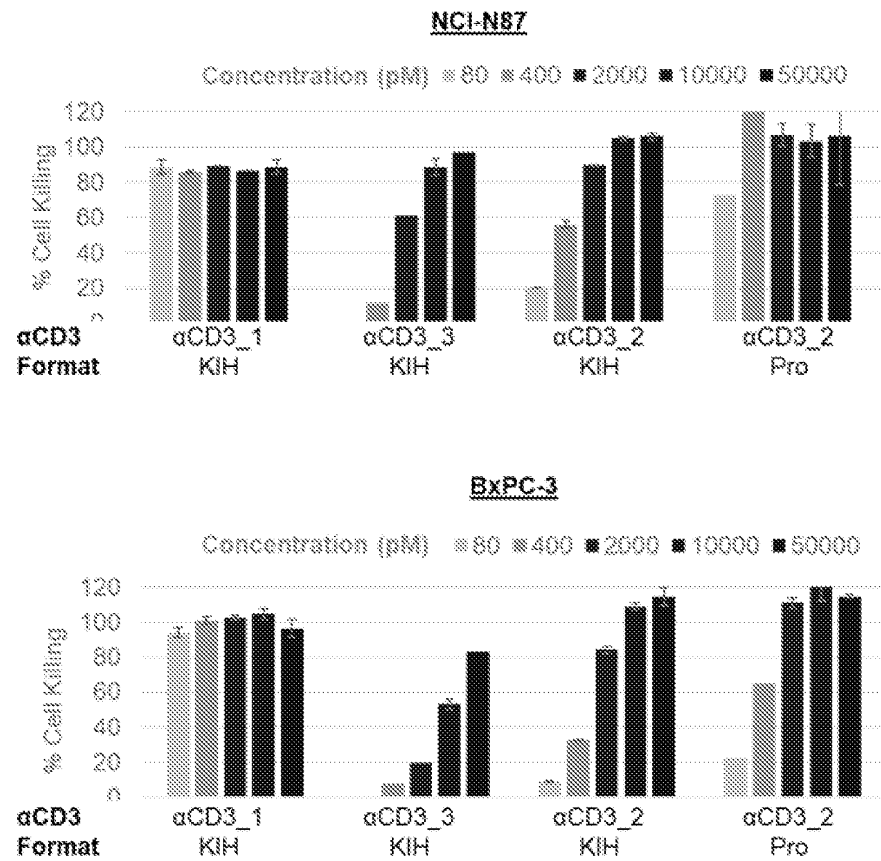


Figure 11

(A)

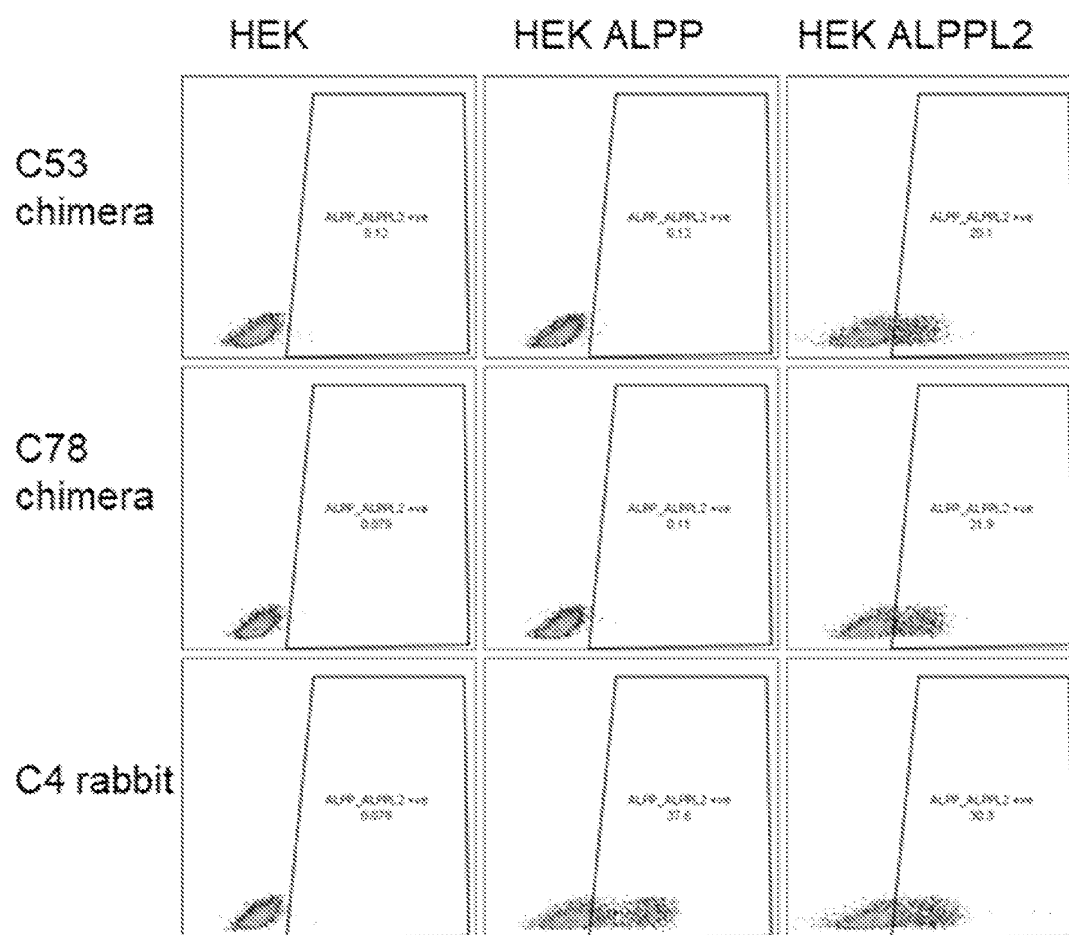
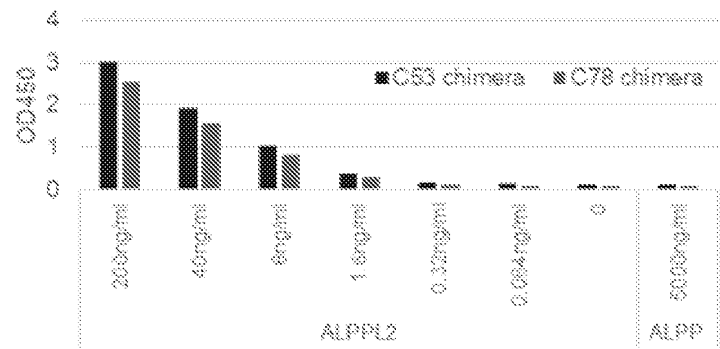
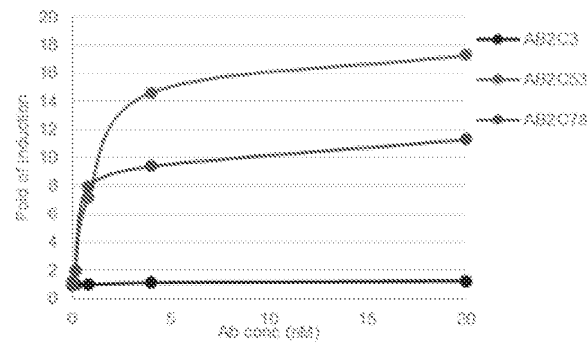


Figure 12 (continued)

(B)



(C)



(D)

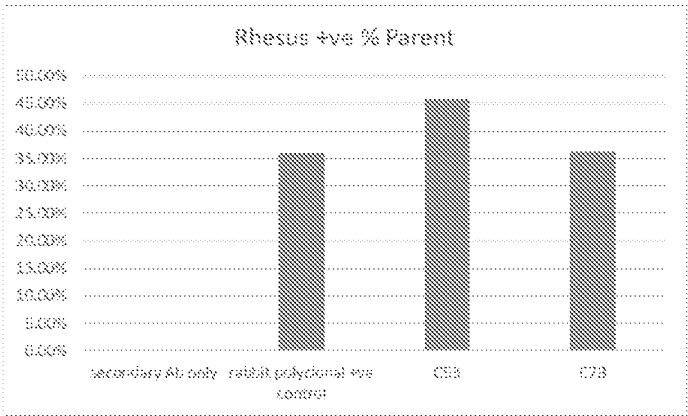
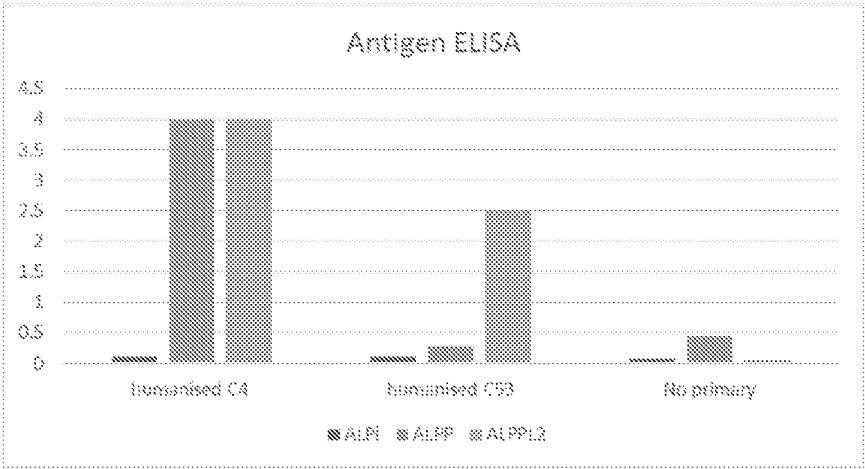


Figure 12 (continued)

(E)



(F)

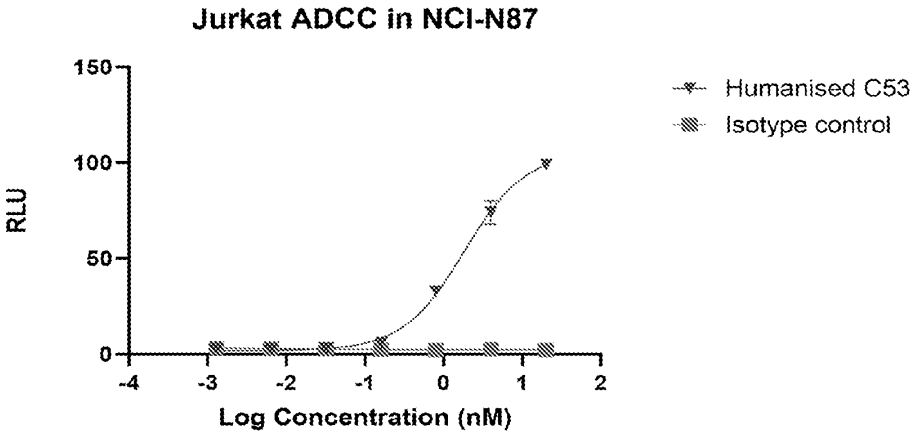


Figure 12 (continued)

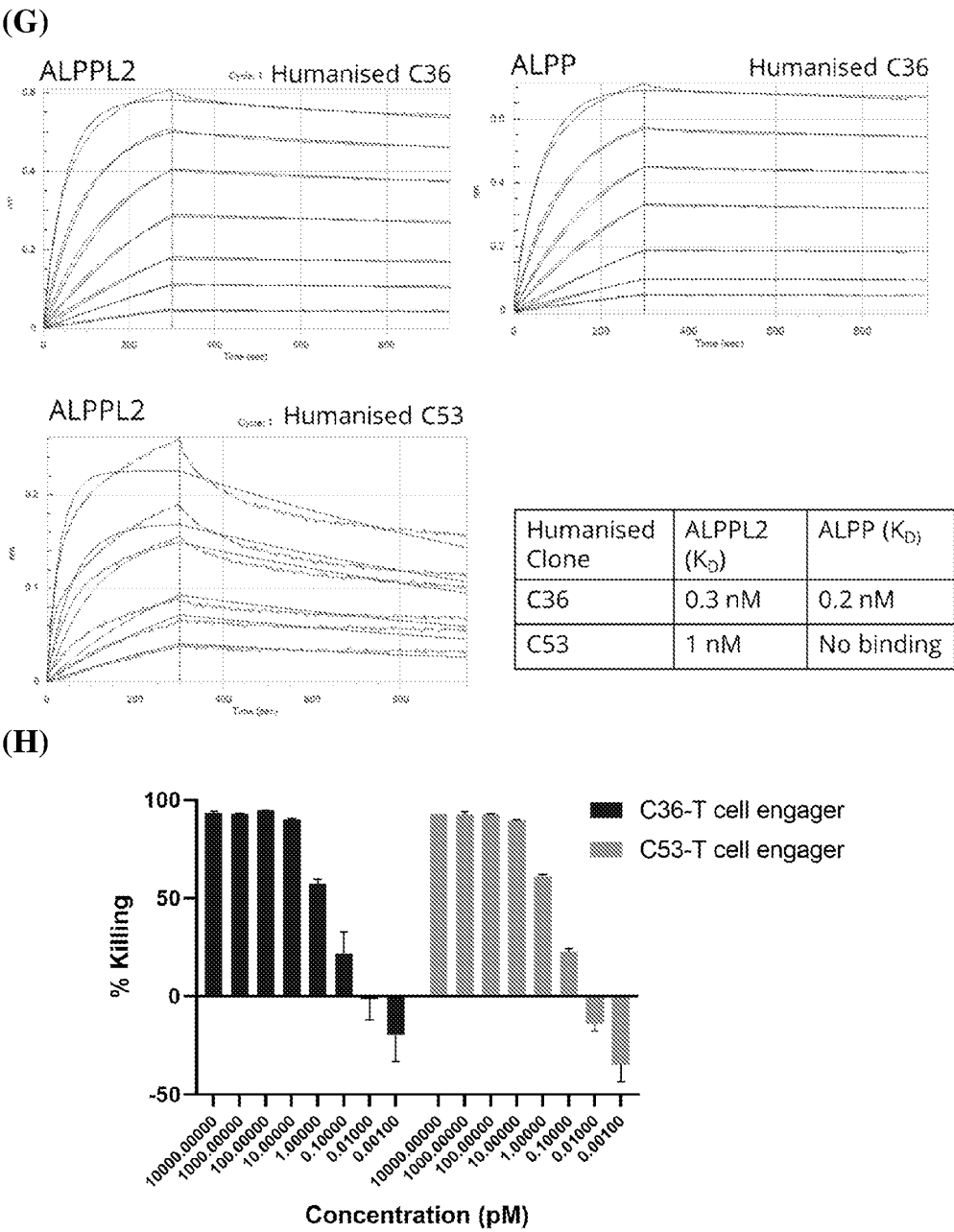
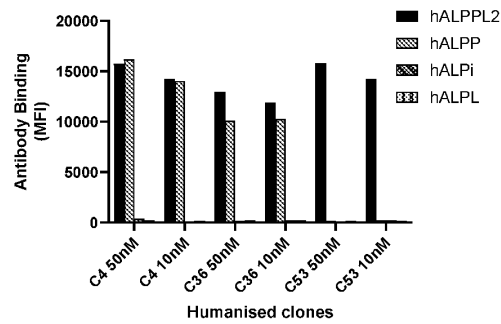
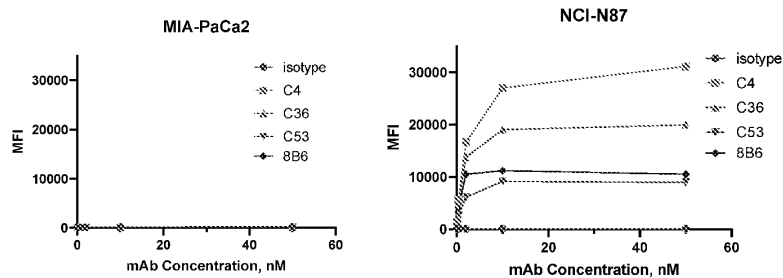


Figure 12 (end)

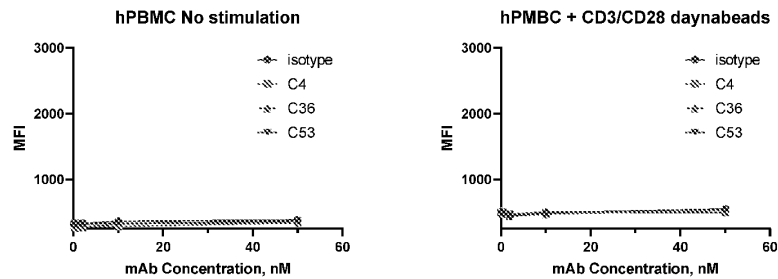
(A)



(B)



(C)



(D)

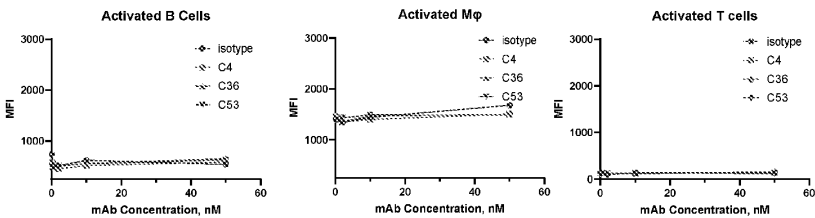


Figure 13