

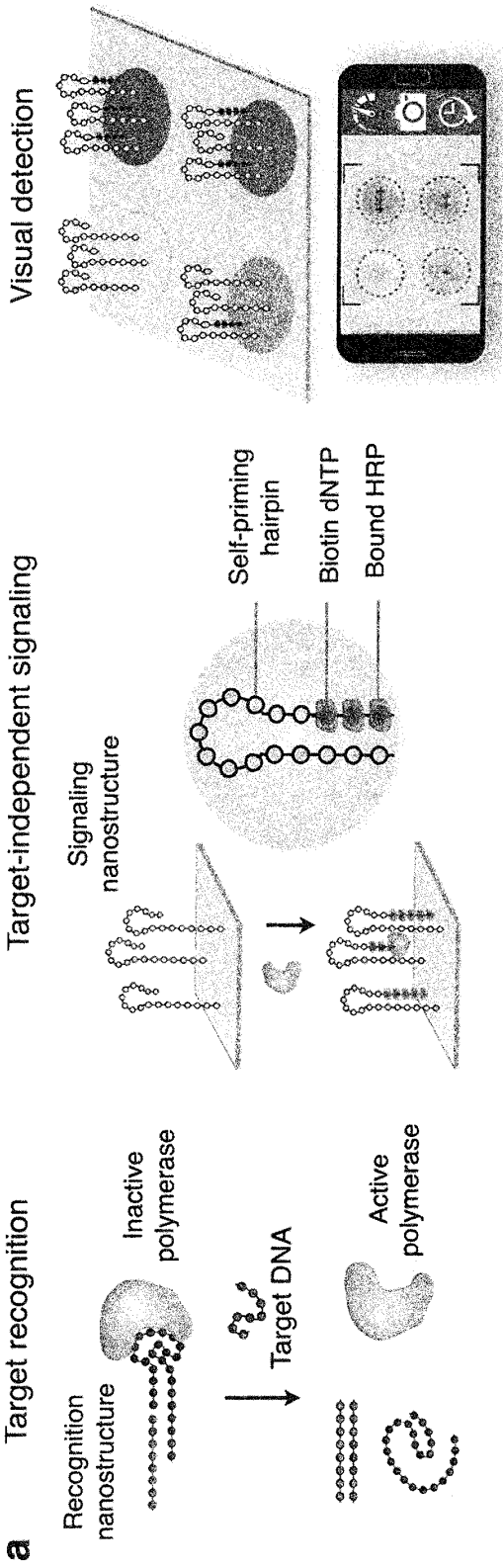


Figure 1

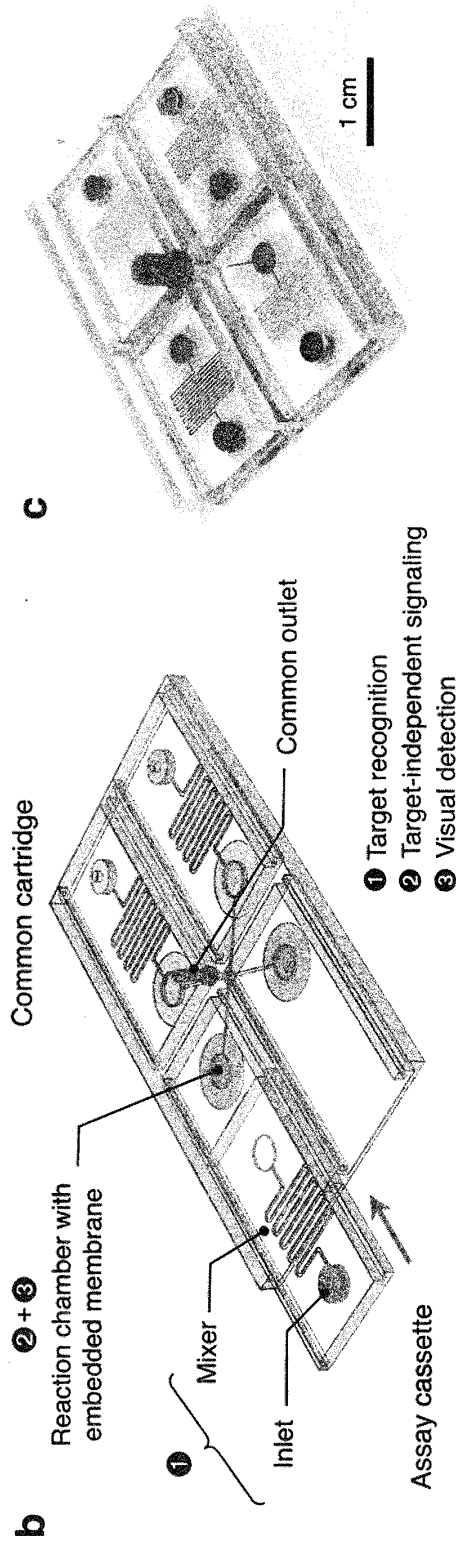


Figure 1 (continued)

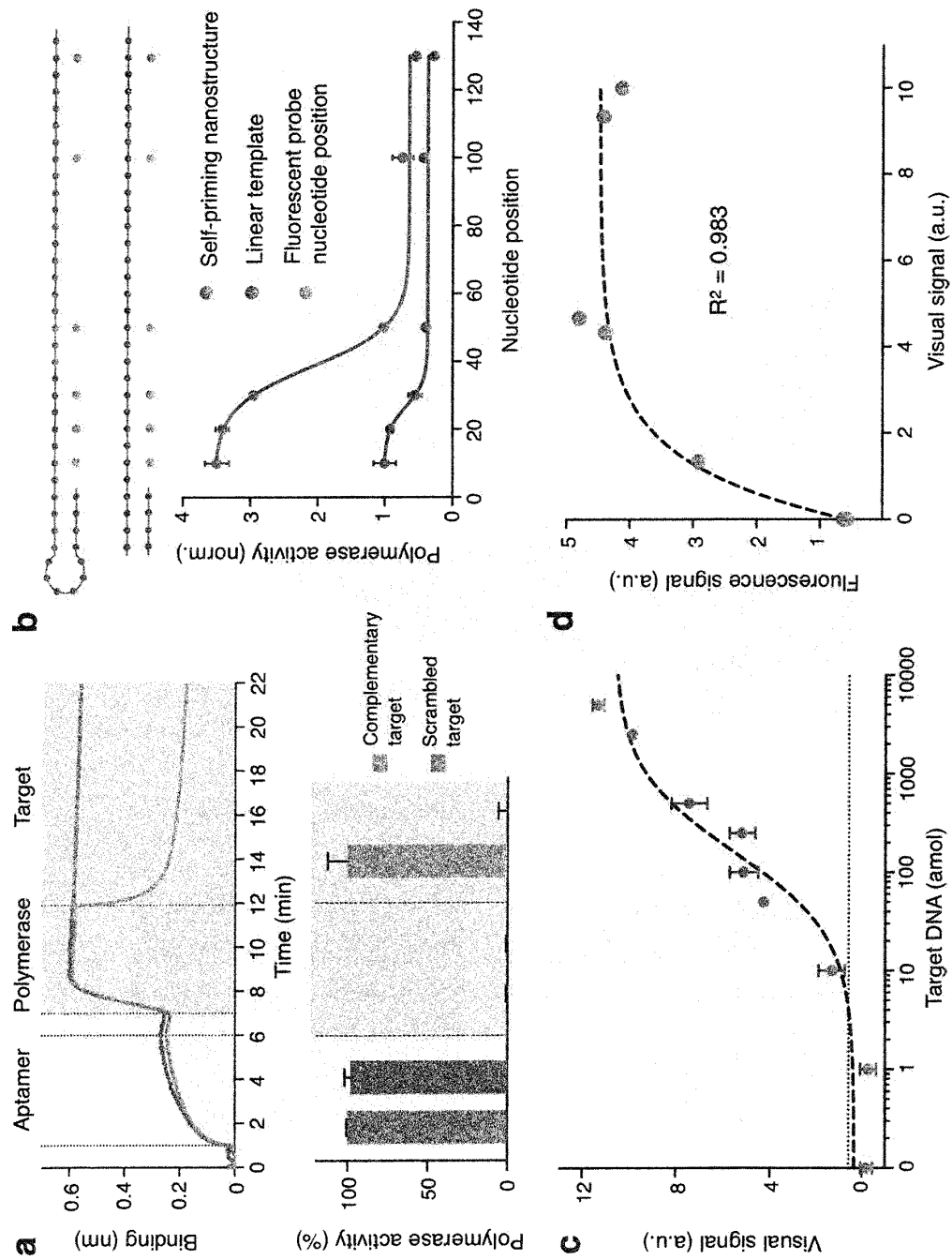


Figure 2

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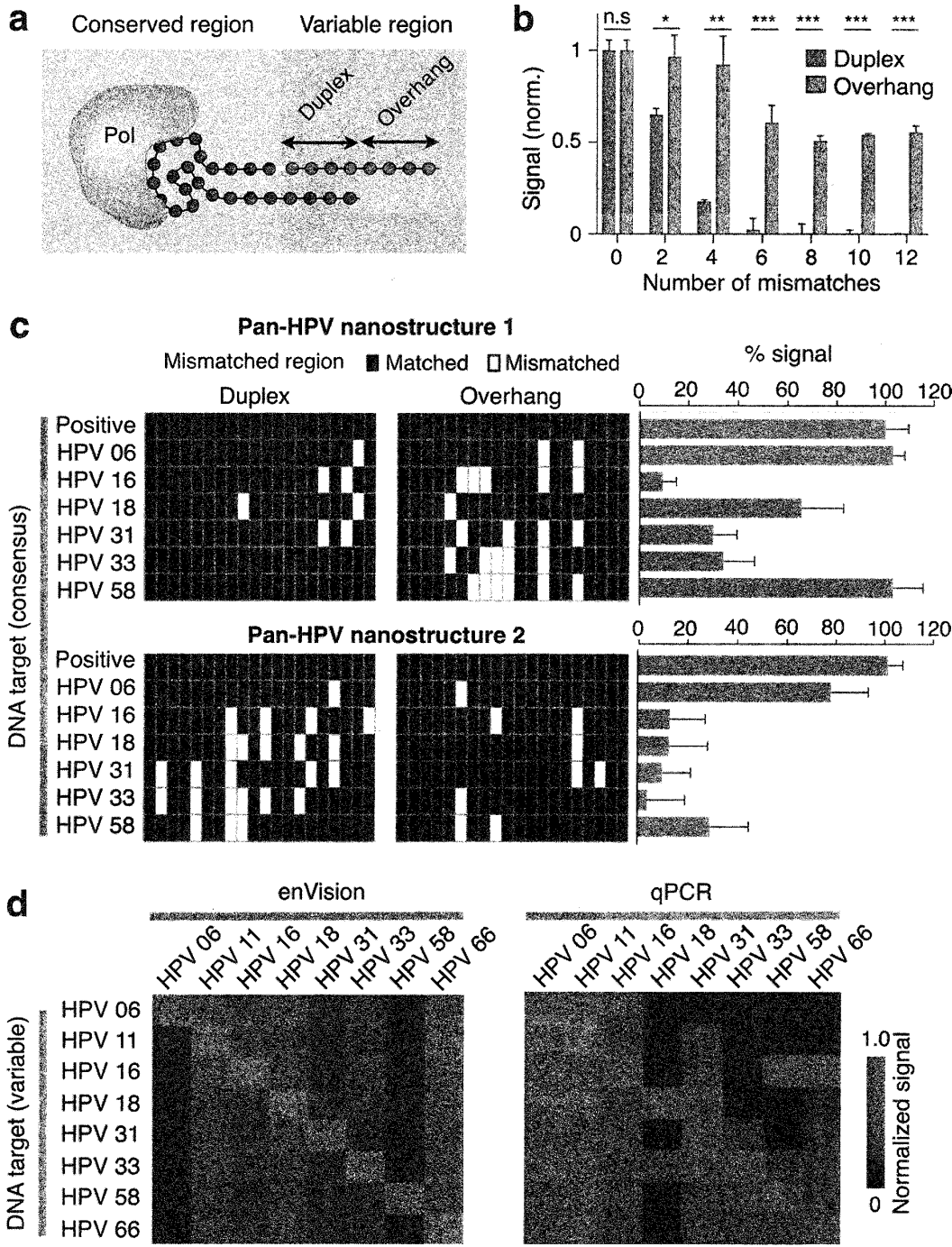


Figure 3

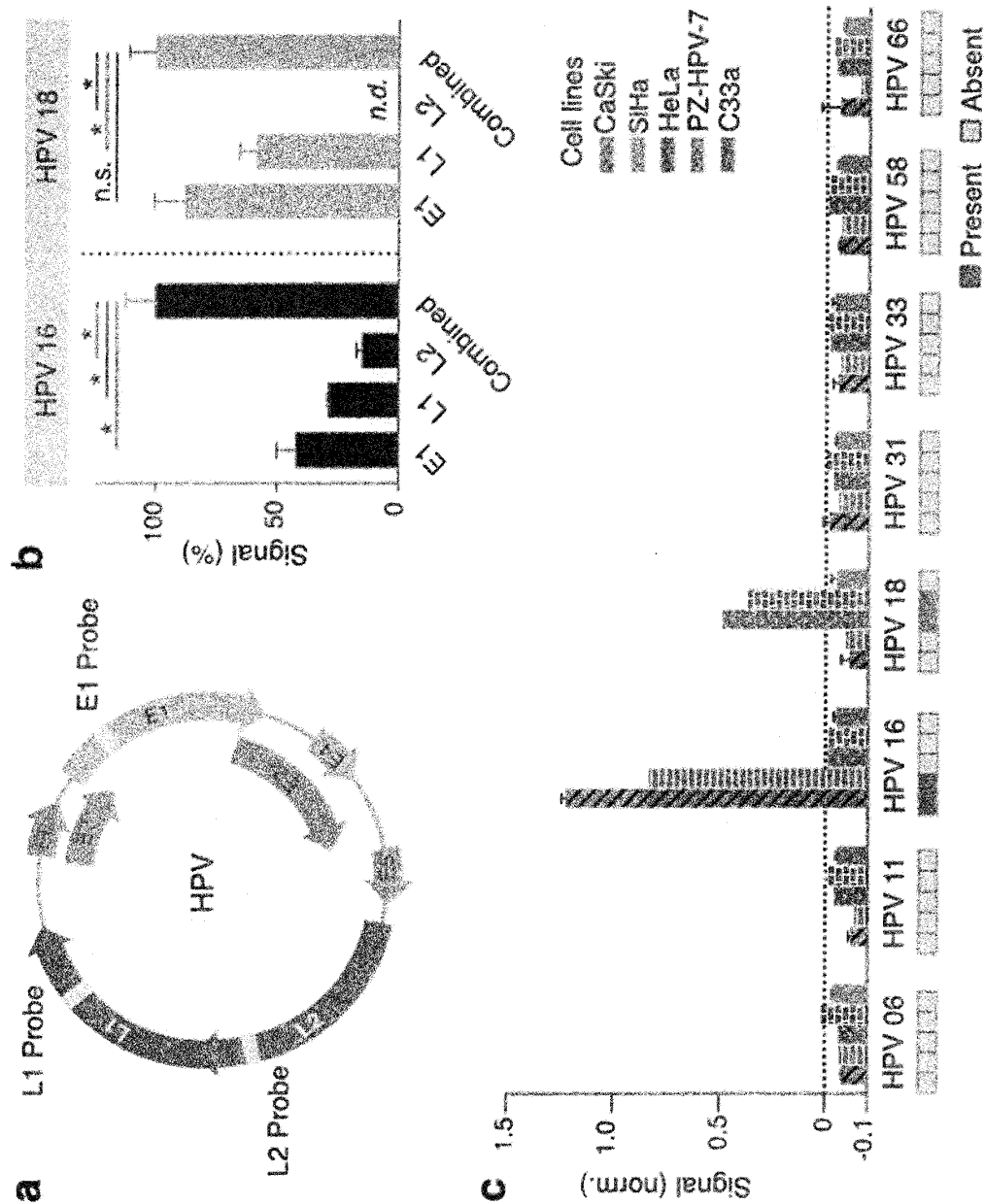


Figure 4

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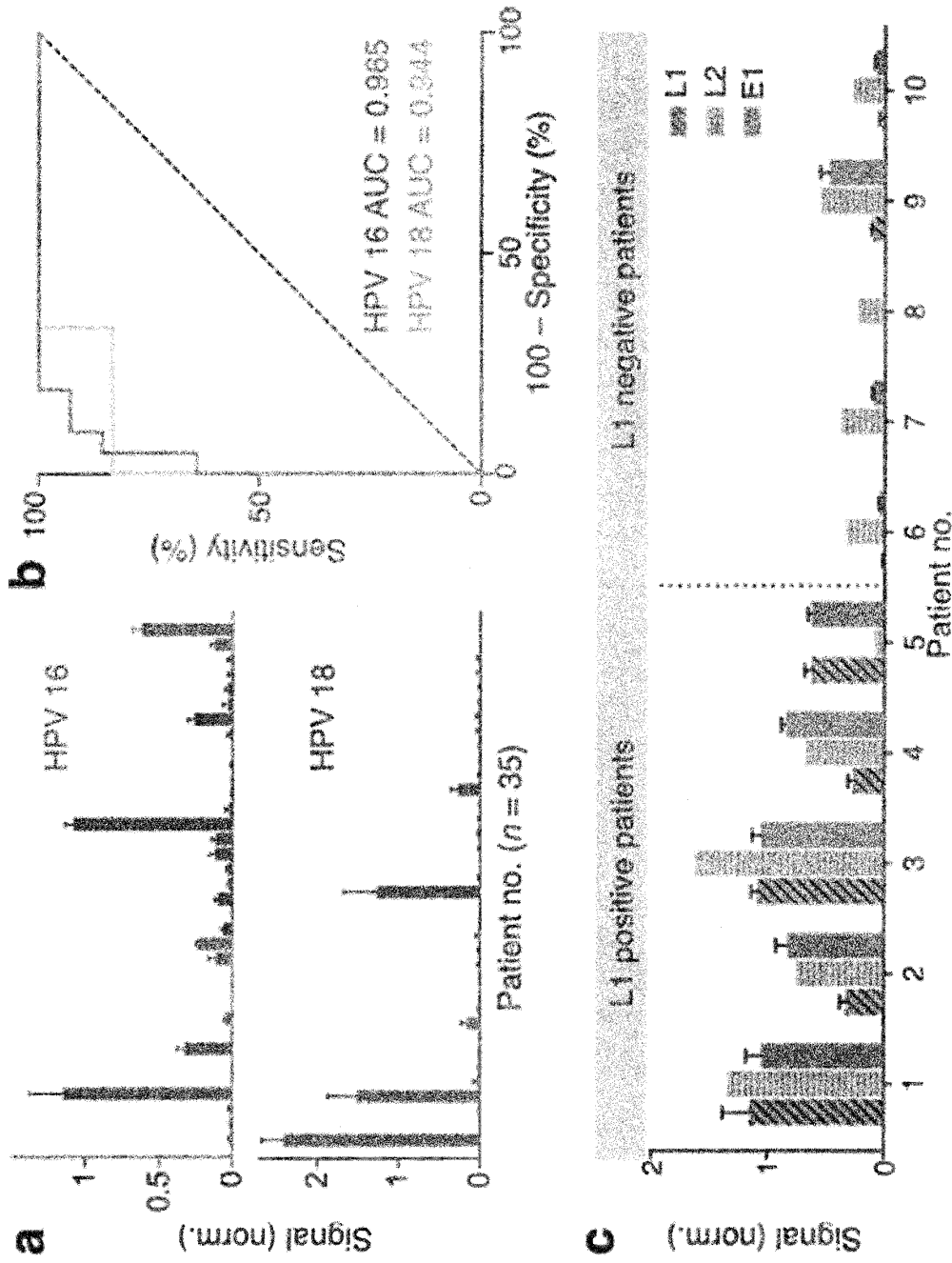
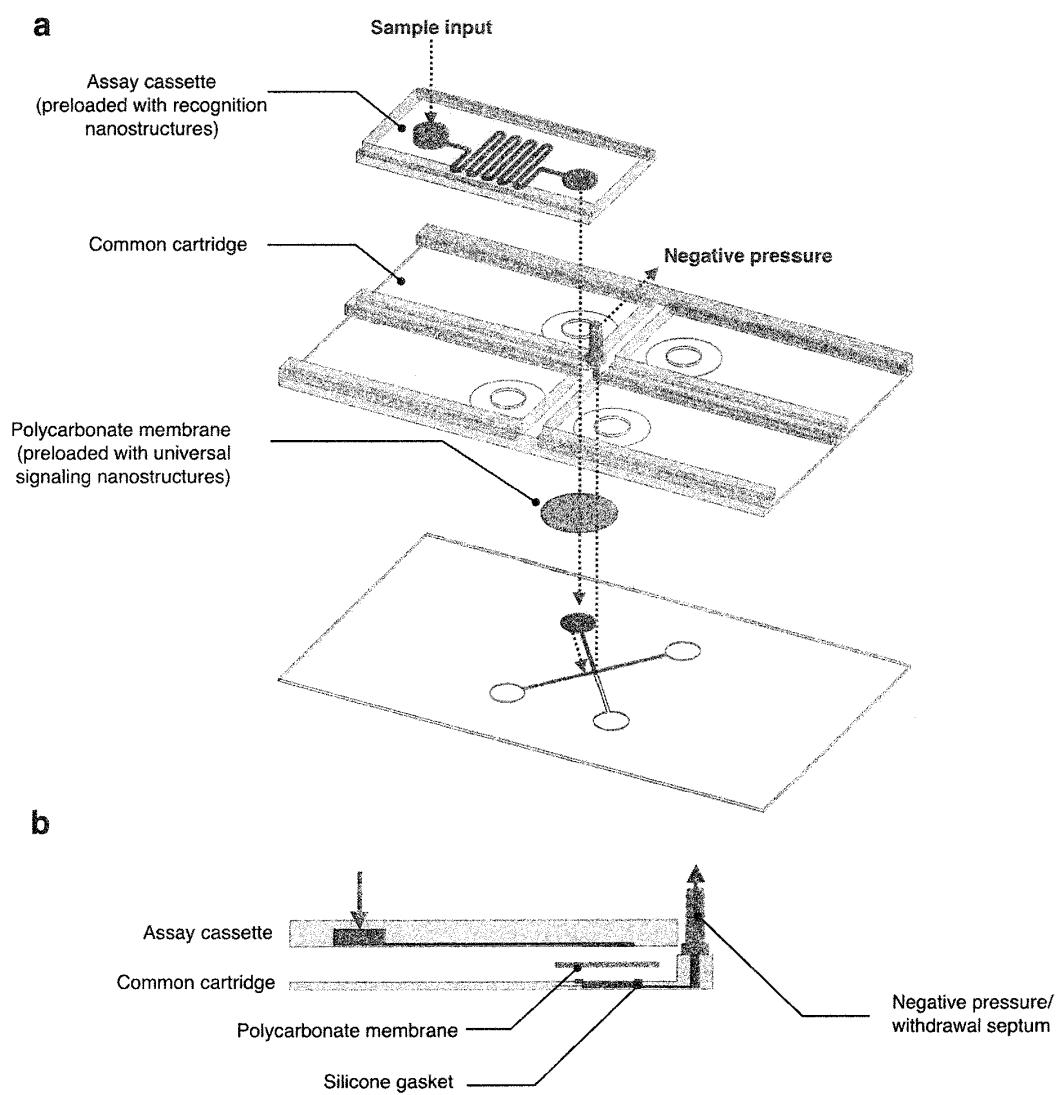
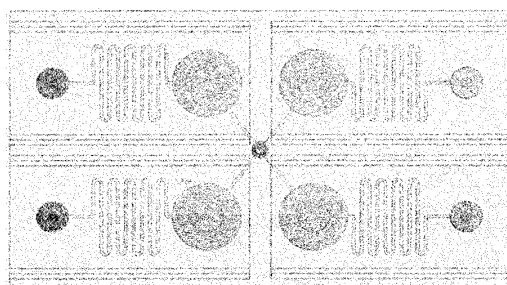


Figure 5

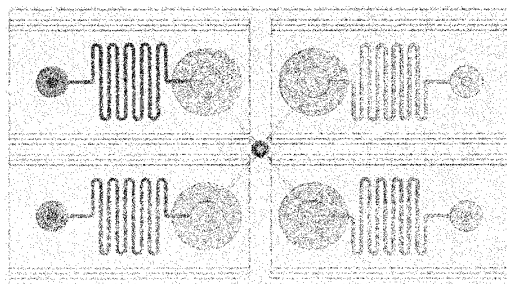
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**Figure 6**



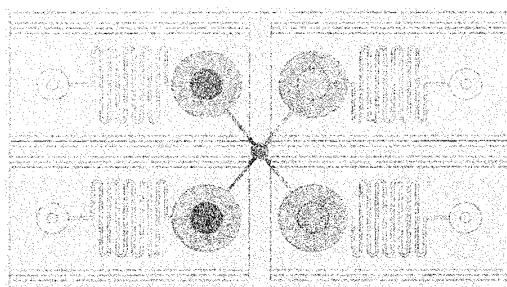
Step 1: Sample loading

Samples are added to the inlets of individual assay cassettes, each preloaded with recognition nanostructures targeting for specific DNA sequences.



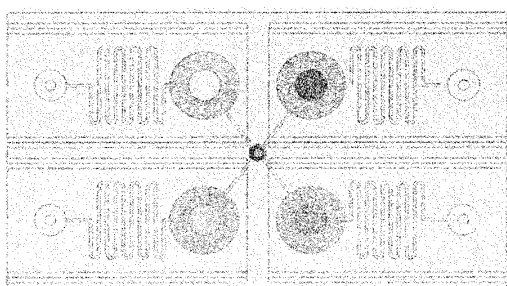
Step 2: Recognition

The assay cassettes are mounted onto the common cartridge. A negative pressure is used to actuate parallel fluid flow. Diffusive mixing in the serpentine channel improves sequence recognition and activation of the inactive polymerase if target is present.



Step 3: Target-independent signal enhancement

The active polymerases are transferred into the reaction chambers, where they add HRP to the immobilized universal signaling nanostructures through biotinylated dNTPs.



Step 4: Visual detection

Unbound HRP is removed and HRP substrate is introduced uniformly into the reaction chambers. Development of the HRP substrates leads to direct visual readout.

Legend:

● ● ● ● Different enVision assays with unique recognition nanostructures

Figure 7

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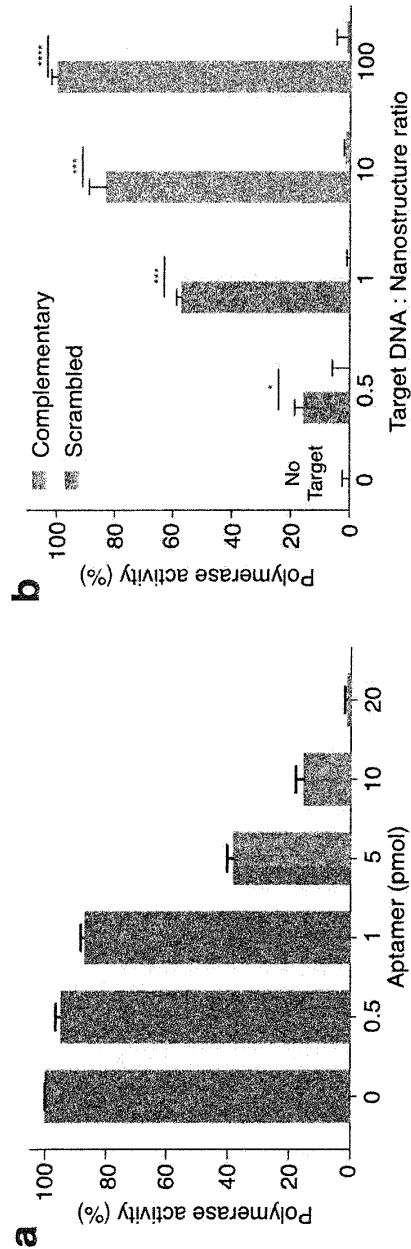


Figure 8

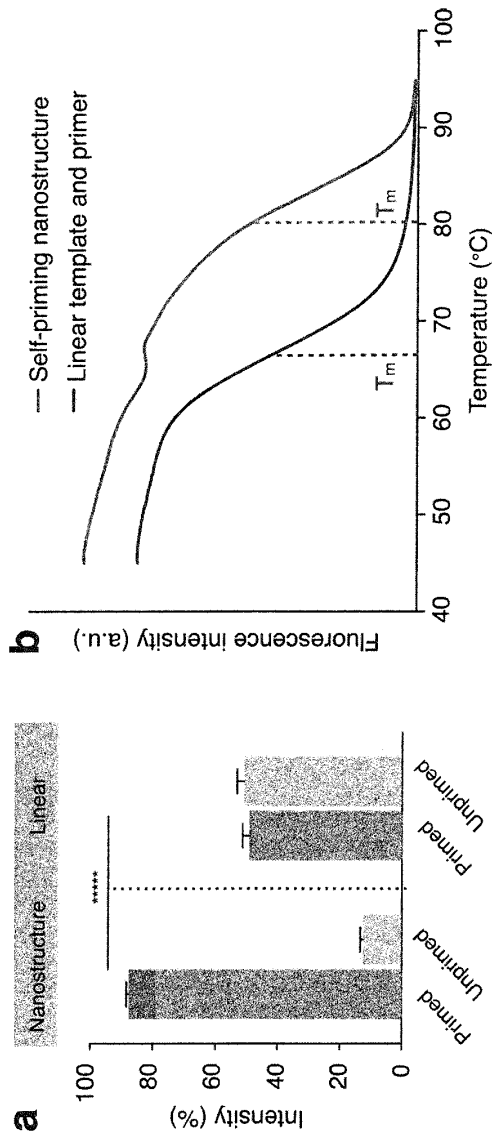


Figure 9

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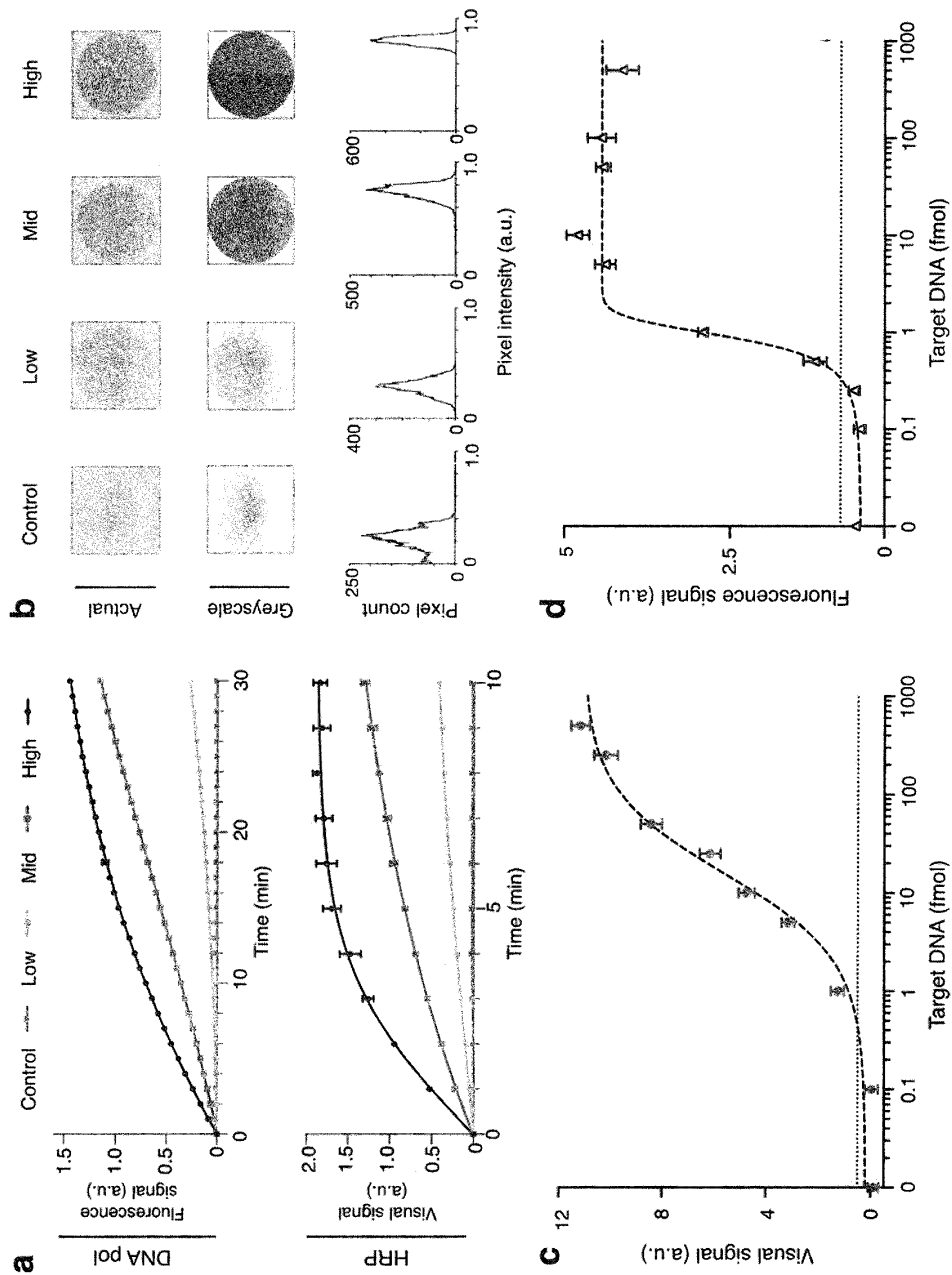


Figure 10

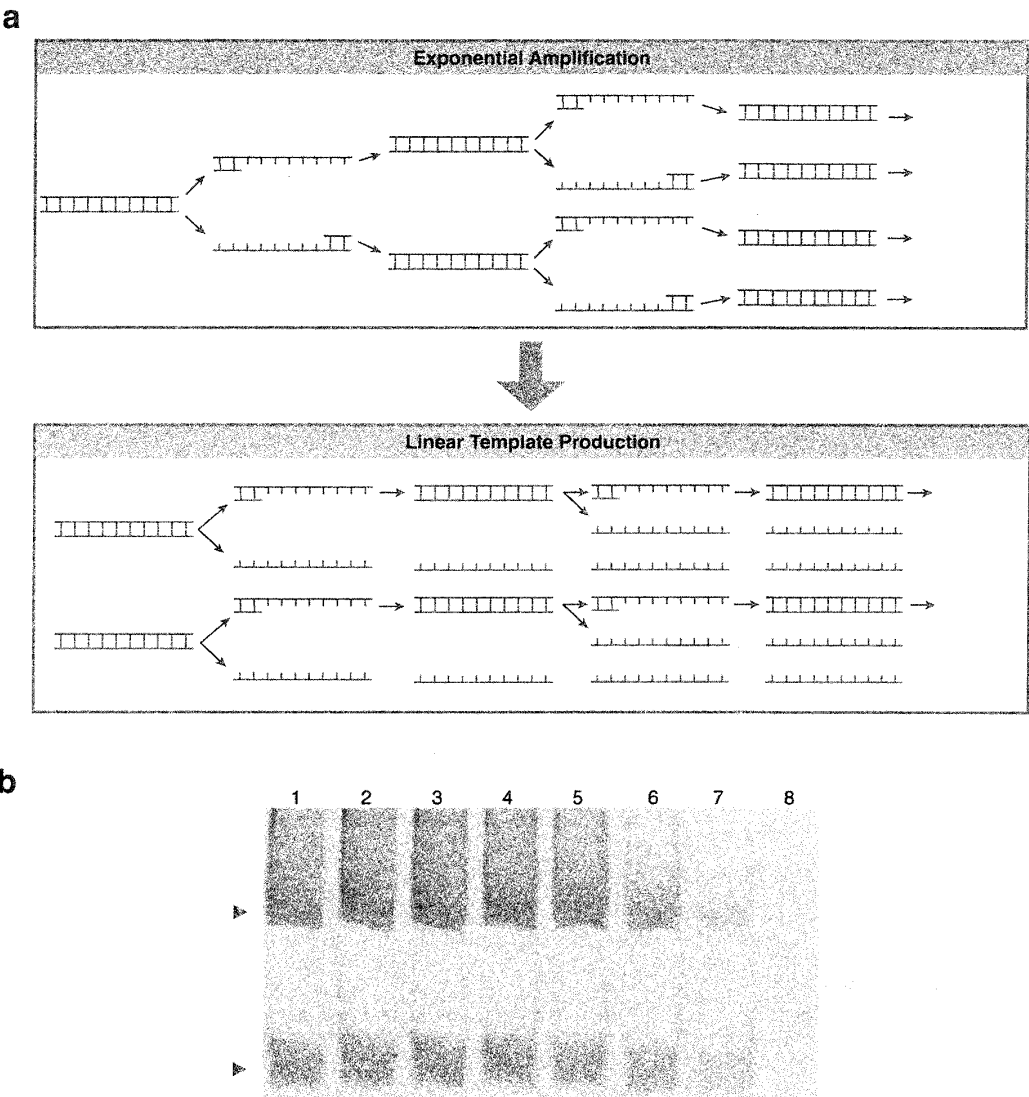


Figure 11

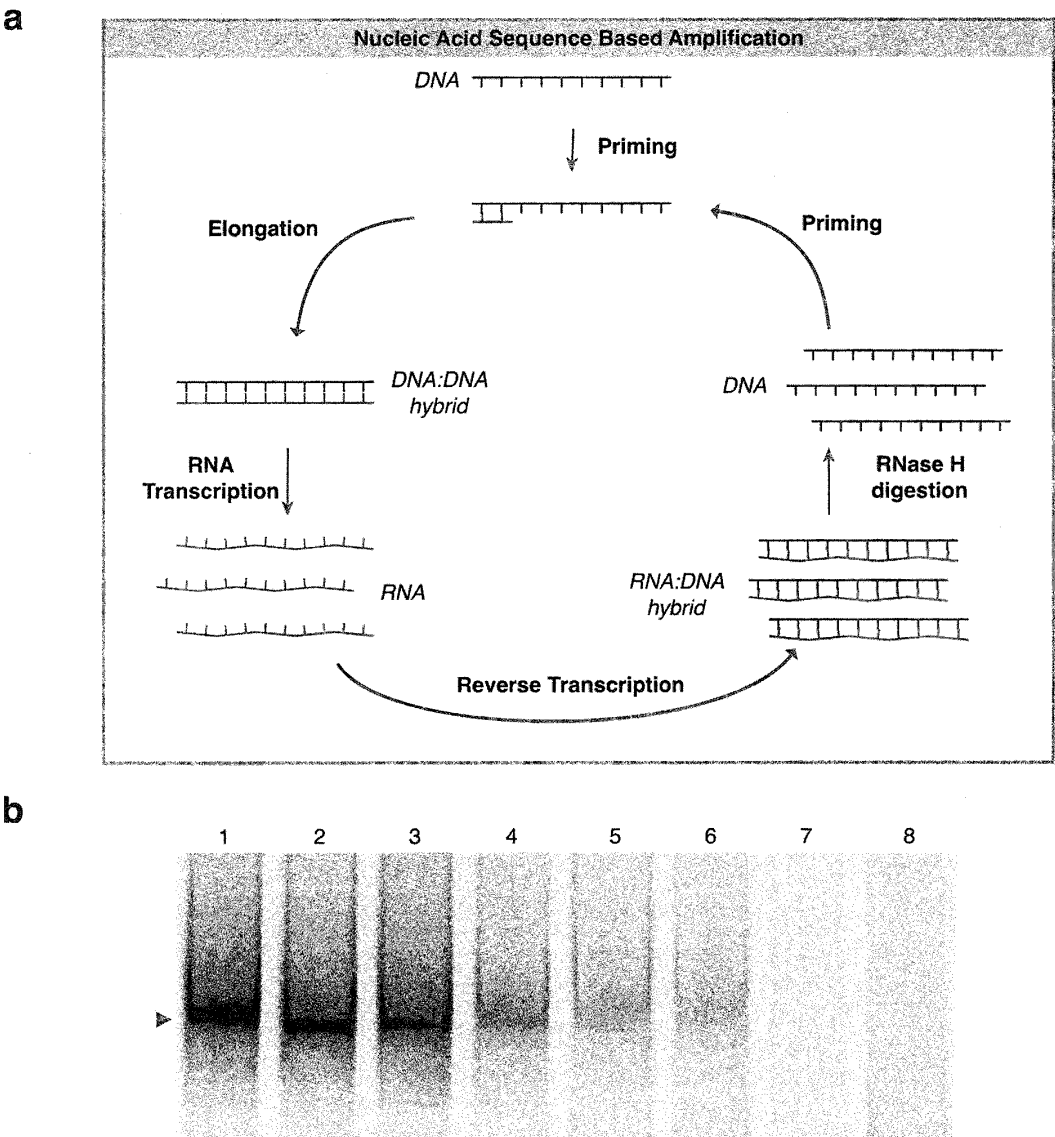


Figure 12

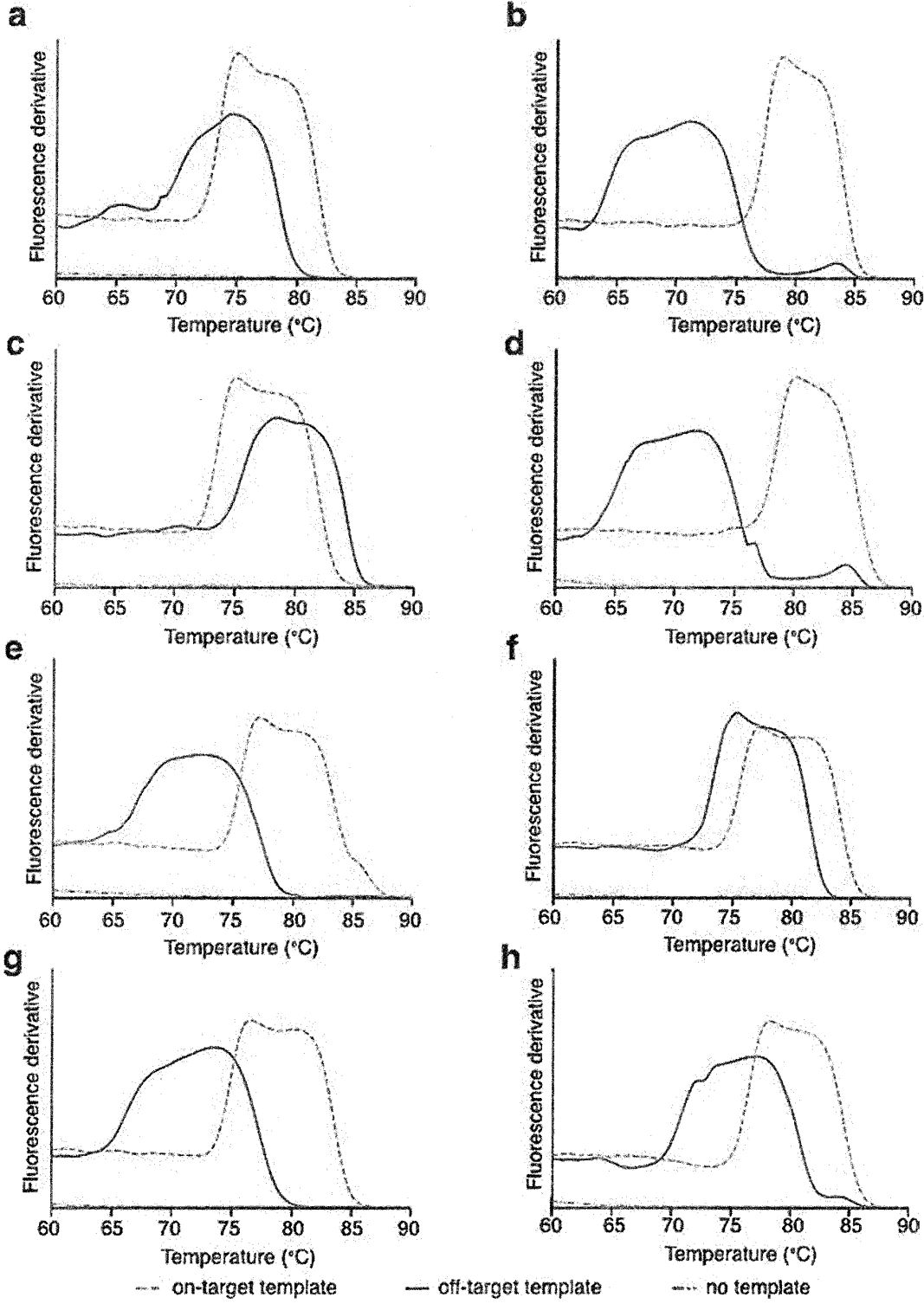


Figure 13

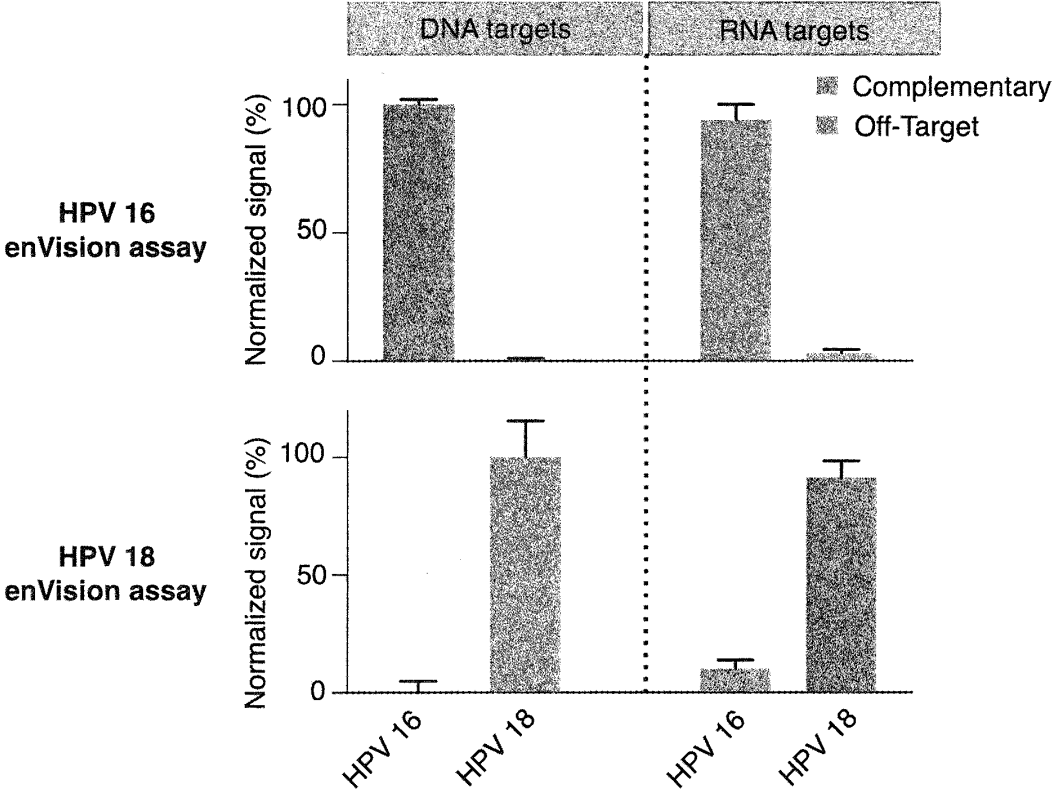


Figure 14

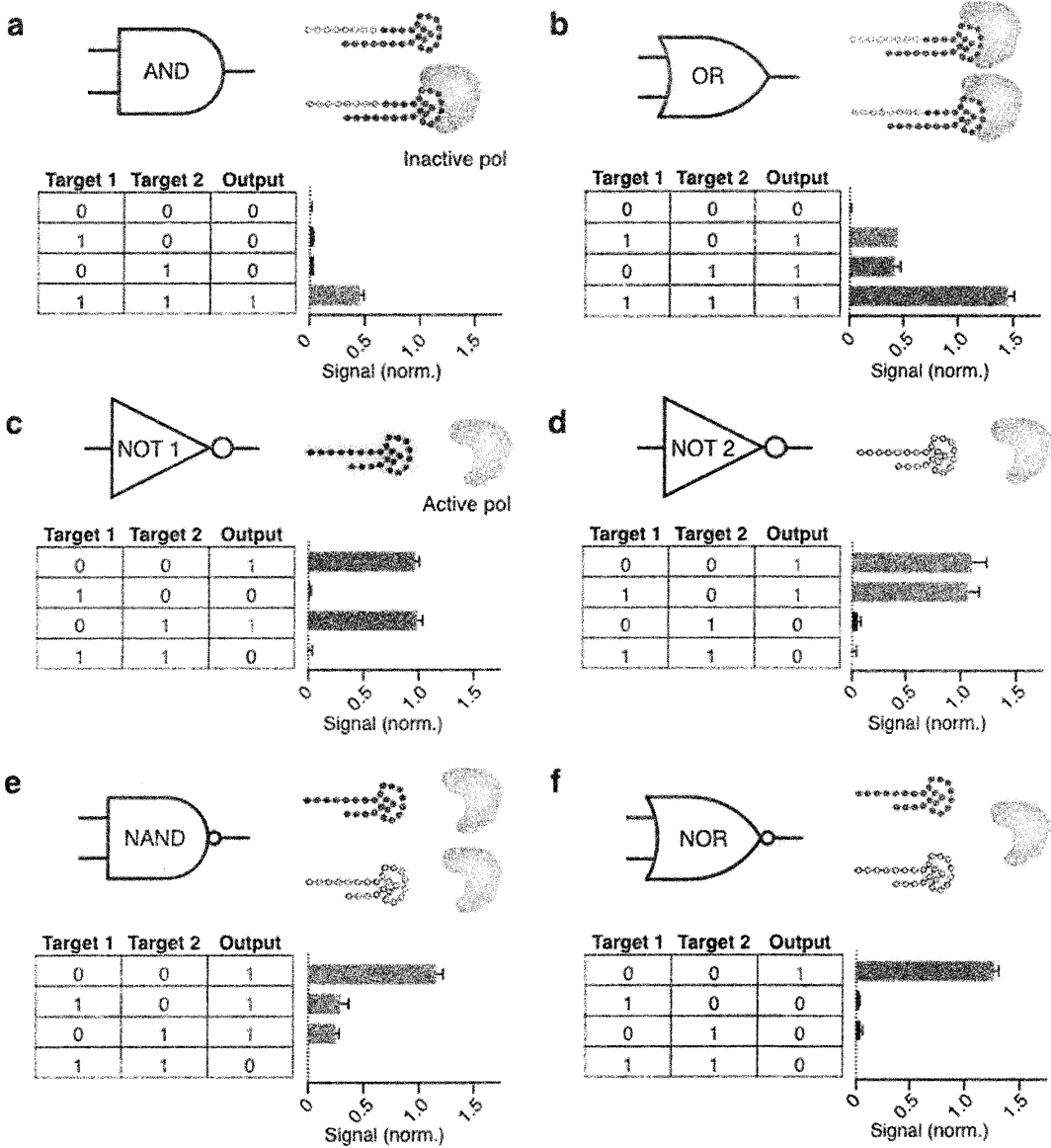


Figure 15

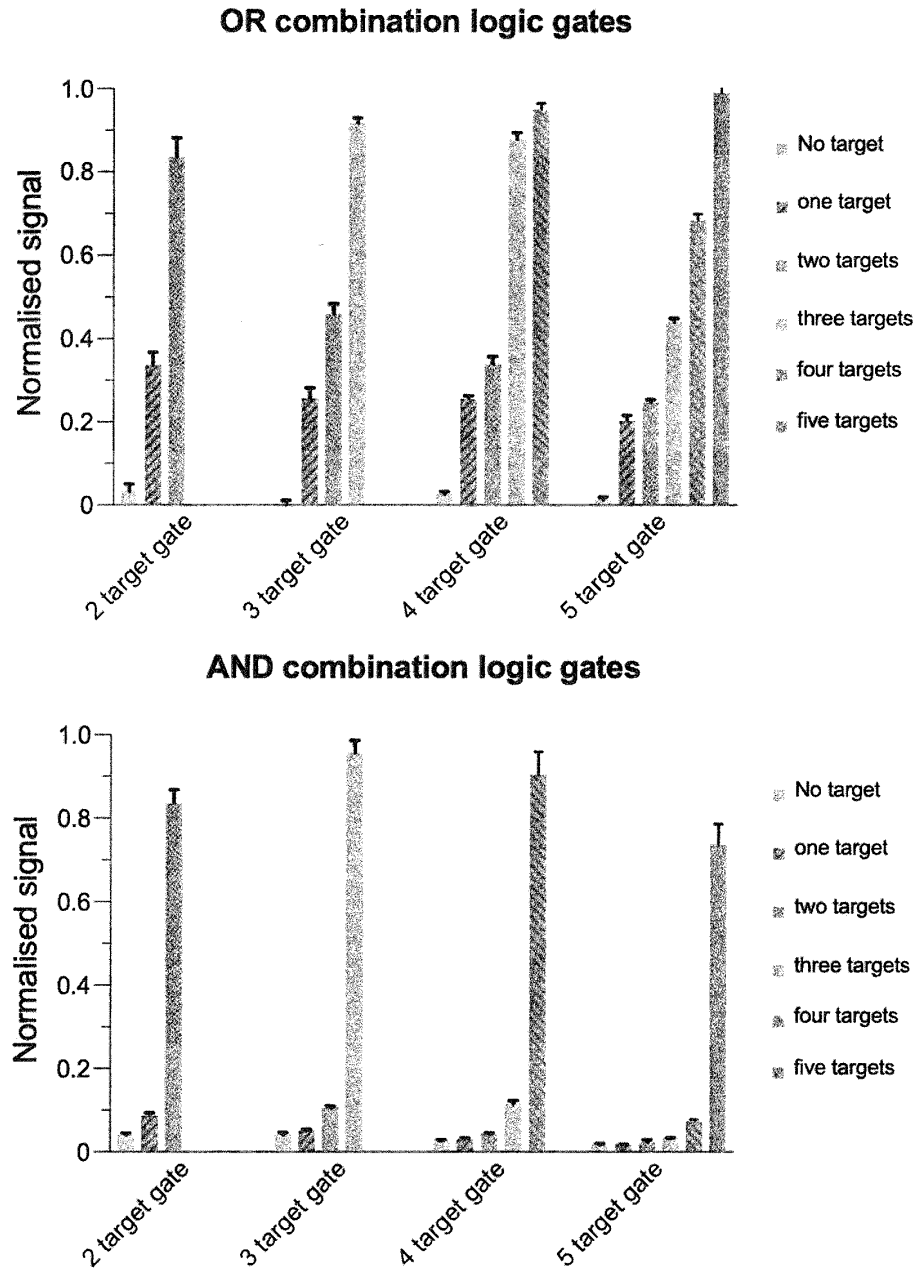


Figure 16

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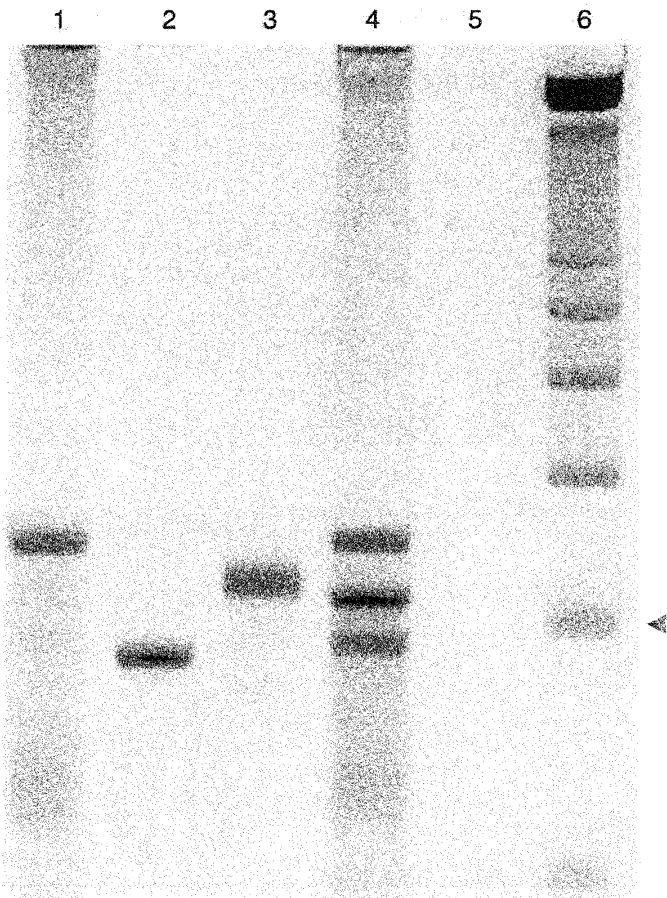


Figure 17

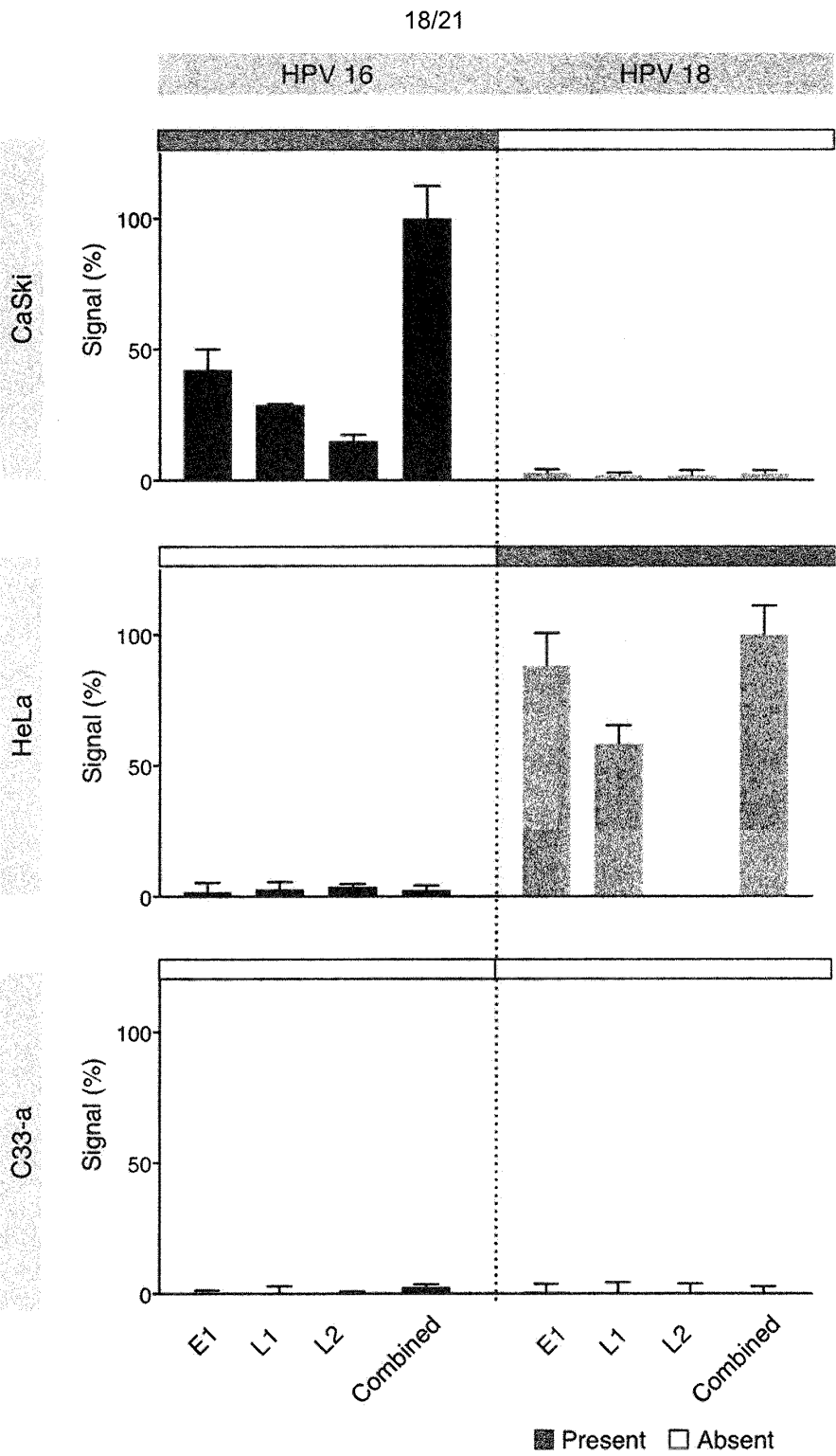


Figure 18

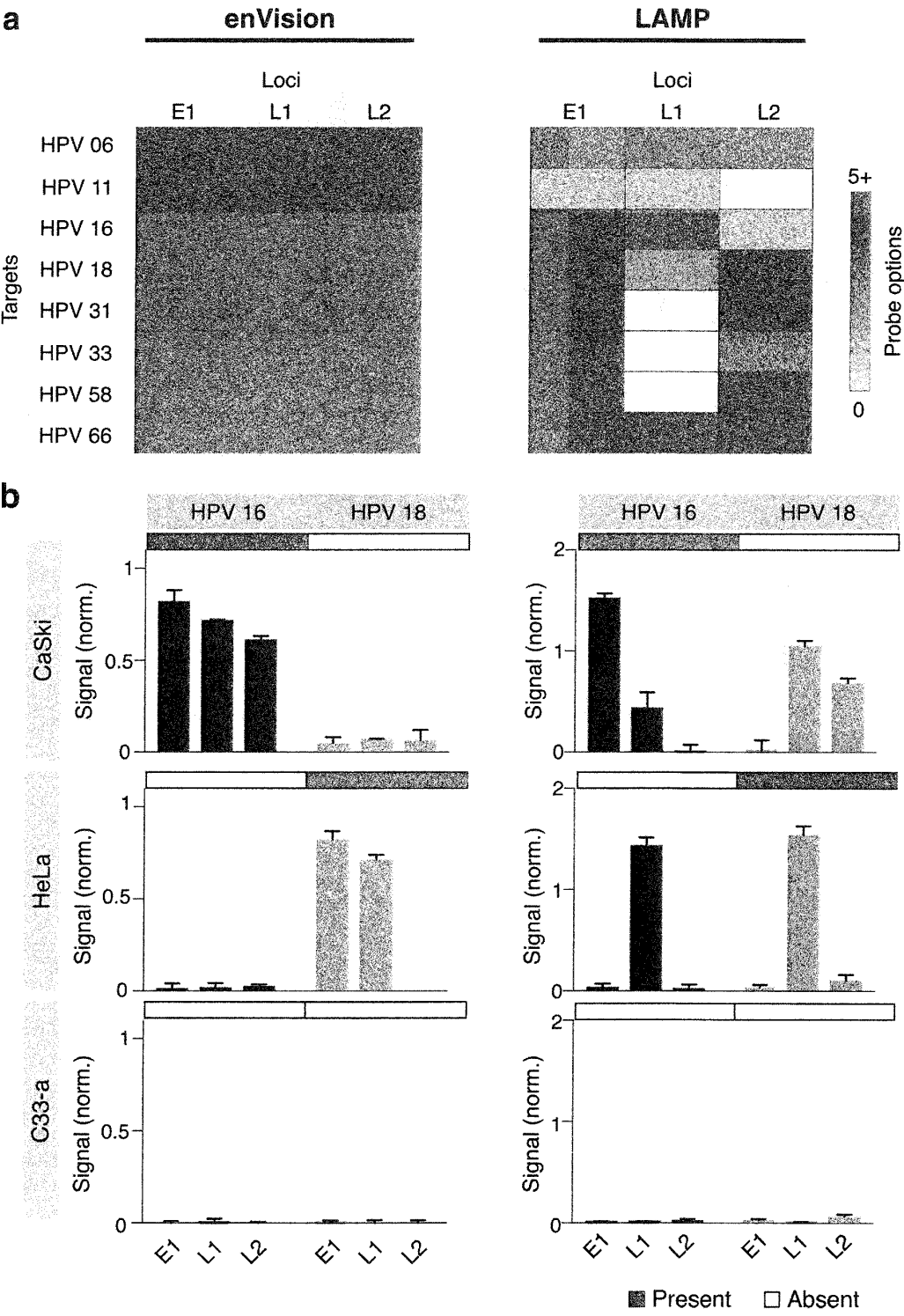


Figure 19

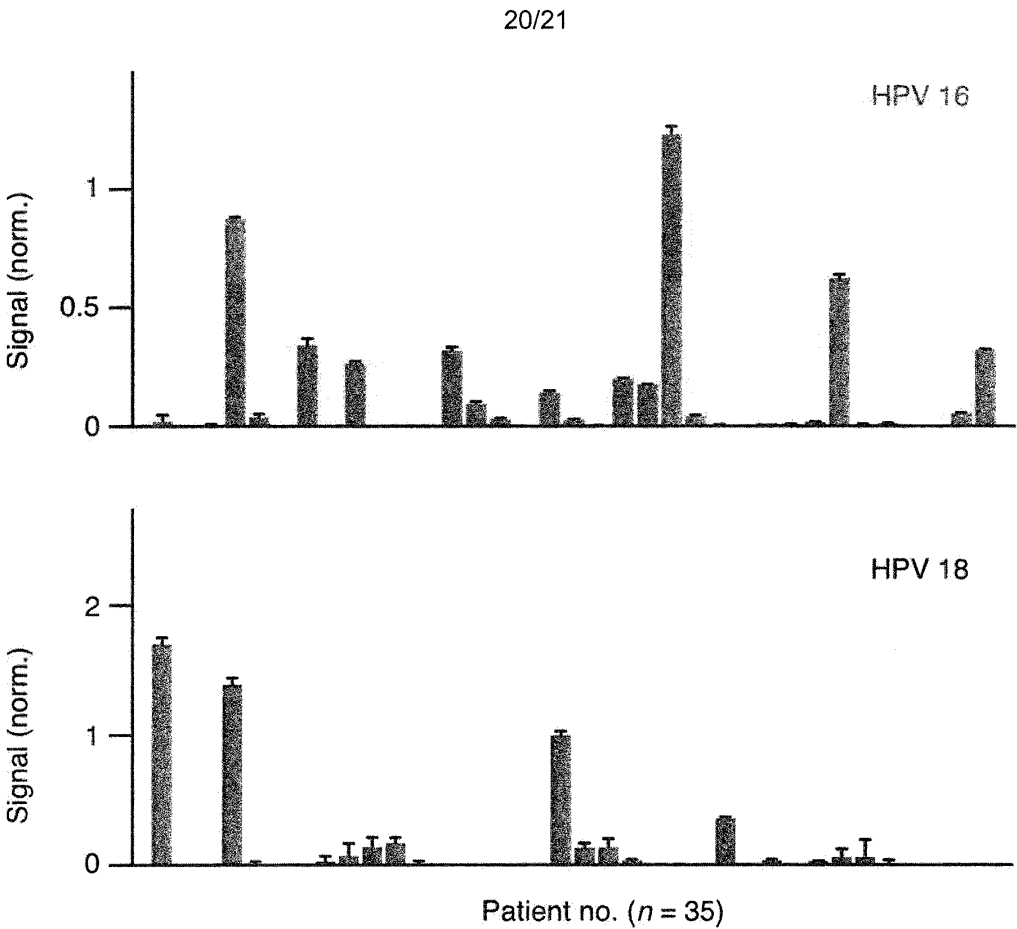


Figure 20

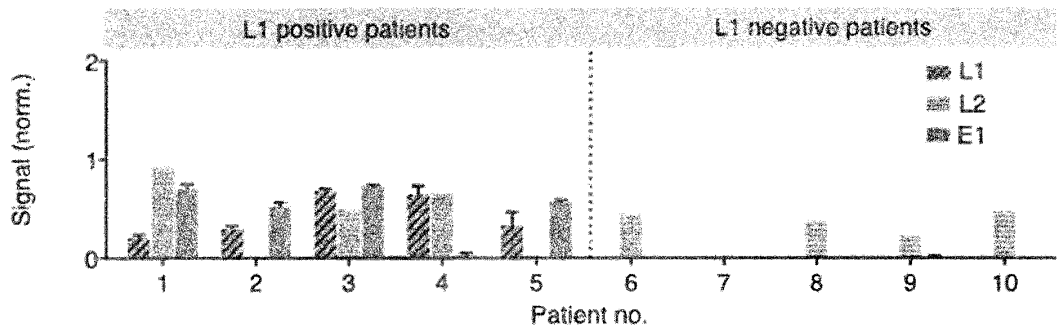


Figure 21

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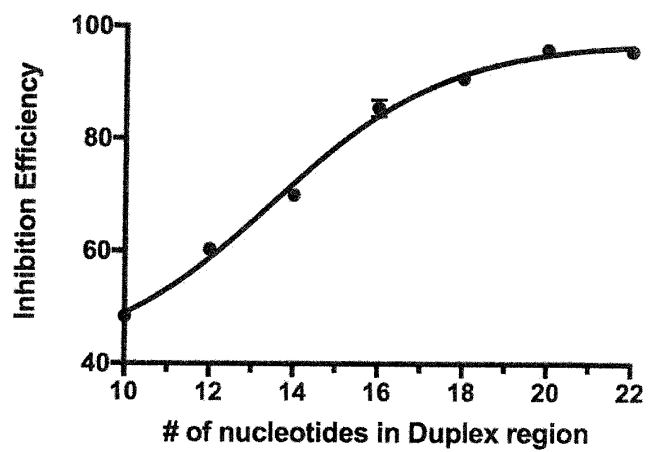


Figure 22