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Applications of Technology:

- Cancer therapy
- Immunotherapy
- Immune associated disease therapy

Our Technology:

Similar to CTLA4 receptor, PD-1 is also a powerful inhibitory receptor that inhibits T cell activation. Compare to CTLA4 that only express on T cell, PD1 majorly express on activated T cell, B cell and macrophage. The boarder distribution of PD1 receptor suggests it might involve in more widely role in immune regulation. Furthermore, PD1 antagonistic antibodies also show significant therapeutic result in treatment of several types of cancers. In this report, we have identified several PD1 antagonistic aptamer and, moreover, a core sequence that containing 9 conserved bases within PD1 aptamer was identified.

Strength:

Nivolumab, a PD1 antagonistic antibody, is now in treatment of several types of cancers. The results suggest treatment of PD1 antagonistic antibody can improve both survival and clinical outcome of the patients.

However, antibody is expensive and highly immunogenic drug that largely limited its application. On the other hand, aptamer have no these kinds of disadvantages. Aptamer is more stable and easy to be chemical modified for variable application. There is no aptamer have been reported to target PD1 receptor and this make our aptamer to be one of a kind.

Intellectual Properties:

US 10329570 B2、TW I703214、JP 6680760、PCT pending

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