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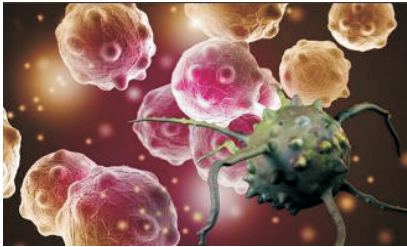
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# Programmed Cell Death Protein-1 Assay

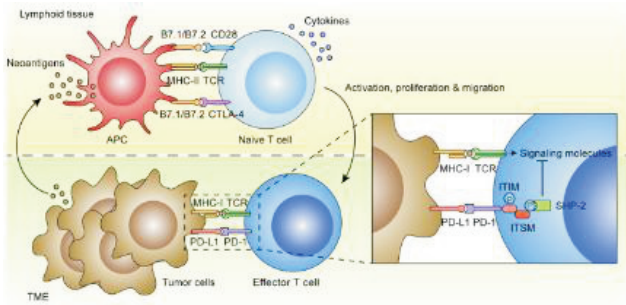
## Detection background

Programmed cell death protein-1 (PD-1) is an important immunosuppressive molecule on the surface of T cells that plays the inhibition of T cell activation. Normally, the immune system responds to foreign antigens clustered in lymph nodes or spleen to promote antigen-specific T cell proliferation, while programmed cell death protein 1 (PD-1) combined to programmed cell death protein ligand 1 (PD-L1) can conduct inhibitory signals to inhibit the proliferation of T cells. Immune antibody drugs targeting PD-1 have shown remarkable results in tumor treatment. The expression level of PD-1 on peripheral blood T lymphocytes and its changes were measured to evaluate the responsiveness of patients to drug therapy, which can assist the disease. Provide reference basis for diagnosis, medication and prognosis.



## Clinical significance

Targeted drug medication guidance:  
Combined with the expression method of PD-1 on the surface of T lymphocytes, it can more effectively predict the effect of targeted drugs. Patients with high PD-1 expression in T lymphocytes also suggest that PD-1 drugs may have better therapeutic expectations.  
Evaluation of the treatment effect:  
Monitoring the expression changes of PD-1 on the surface of T lymphocytes during the targeted drug PD-1 treatment can help



Schematic diagram of the structure of PD-1 on the surface of T cells

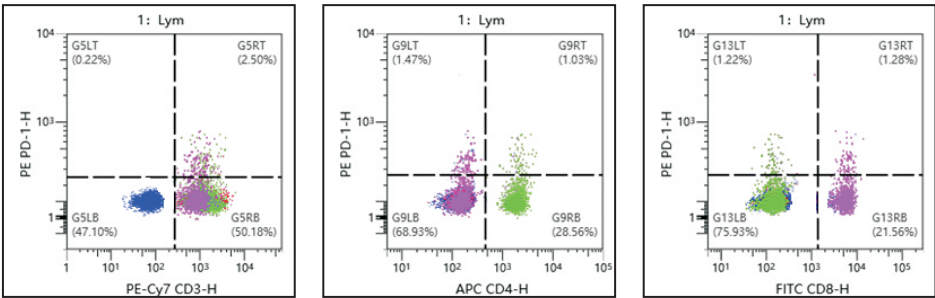
## Detection index

| Item name   | Antibody / Sign                     |
|---|-------------------------------------|
| Rate of PD-1 expression in total T lymphocytes            | CD3 <sup>+</sup> /PD-1 <sup>+</sup> |
| Rate of PD-1 expression in CD4 <sup>+</sup> T lymphocytes | CD4 <sup>+</sup> /PD-1 <sup>+</sup> |
| Rate of PD-1 expression in CD8 <sup>+</sup> T lymphocytes | CD8 <sup>+</sup> /PD-1 <sup>+</sup> |

## Application department

Infectious Disease | Oncology | Pathology | Surgery

## Flow reference diagram



Reference diagram for the assay of PD-1 item

## Product information

| Detection items | Product name       | Specifications       | Art.No. | Applicable model          | Registration certificate number |
|-----------------|--------------------|----------------------|---------|---------------------------|---------------------------------|
| PD-1            | CD45 assay reagent | 50/100/200 Tests/kit | 100102  | Single laser three colors | Wan He Xie Bei20220444          |
|                 | CD3 assay reagent  | 50/100/200 Tests/kit | 100202  |                           | Wan He Xie Bei20220460          |
|                 | PD-1 assay reagent | 50/100/200 Tests/kit | 101401  |                           | Wan He Xie Bei20220490          |
|                 | CD3 assay reagent  | 50/100/200 Tests/kit | 100202  | Single laser four colors  | Wan He Xie Bei20220460          |
|                 | CD4 assay reagent  | 50/100/200 Tests/kit | 100301  |                           | Wan He Xie Bei20220461          |
|                 | CD8 assay reagent  | 50/100/200 Tests/kit | 100402  |                           | Wan He Xie Bei20220462          |
|                 | PD-1 assay reagent | 50/100/200 Tests/kit | 101401  |                           | Wan He Xie Bei20220490          |
|                 | CD45 assay reagent | 50/100/200 Tests/kit | 100102  | Two lasers five colors    | Wan He Xie Bei20220444          |
|                 | CD3 assay reagent  | 50/100/200 Tests/kit | 100202  |                           | Wan He Xie Bei20220460          |
|                 | CD4 assay reagent  | 50/100/200 Tests/kit | 100303  |                           | Wan He Xie Bei20220461          |
|                 | CD8 assay reagent  | 50/100/200 Tests/kit | 100403  |                           | Wan He Xie Bei20220462          |
|                 | PD-1 assay reagent | 50/100/200 Tests/kit | 101401  |                           | Wan He Xie Bei20220490          |



## Reference

[ 1 ] Dong Yan, Wang Tao, Yu Xiaofang. Research progress on the application of PD-1 related immune regulation [J]. Chemistry of Life, 2015,35 (6): 709-714.  
[ 2 ] Yan Mi, Jinming Han, Jie Zhu, Tao Jin. Role of the PD-1/PD-L1 Signaling in Multiple Sclerosis and Experimental Autoimmune Encephalomyelitis: Recent Insights and Future Directions[J]. Mol Neurobiol, 2021; 58(12): 6249-6271.