#### Features of chemiluminescent cytokine detection technology

#### MQ60 (smart, proB, plus) series single cartridge chemiluminescence immunoassay analyzer





MQ60 smart

MQ60 ProB



MQ60 plus

#### **Features**

- Liquid phase reaction, chemiluminescence method, high sensitivity, stable results;
- Reagents are packaged in single servings and tested on demand;
- No consumables, no hidden costs, no limitation from on-board stability;
- Fast and high-throughput: complete 6, 12 or 24 tests in 17 minutes;
- Accurate results with quality control.

#### **Cytokine Project Product Information**

Parameter	Linear Range	Reference Value
ΙL-1β	3-1000 pg/mL	<4.9 pg/mL
IL-2	2.5-1000 pg/mL	<12 pg/mL
IL-2R	5-7500 U/mL	228-724 U/mL
IL-4	2.5-2500 pg/mL	<12.8 pg/mL
IL-5	2.5-2500 pg/mL	<5.9 pg/mL
IL-6	1.5-5000 pg/mL	<7 pg/mL
IL-8	5-7500 pg/mL	<63 pg/mL
IL-10	3-1000 pg/mL	<9.5 pg/mL
IL-12p70	2.5-1000pg/mL	<10.5pg/mL
IL-17A	2.5-2500 pg/mL	<5.6 pg/mL
IL-22	1-1000pg/mL	<3.71pg/mL
IFN-γ	2-1000 IU/mL	<4 IU/mL
TNF-α	3-1000 pg/mL	<8.5 pg/mL



# **Cytokine series reagents**



## Chemiluminescence method

#### Characteristics of cytokine detection technology by chemiluminescence method



#### Intervention suggestions for different stages of cytokine storm



#### Cytokines and disease risk prediction

#### **Cancer risk prediction**

- Promote tumor progression: IL-1β, IL-4, IL-6, IL-8, IL-10
- Enhance the body's anti-tumor immunity: IL-2, IL-2R

#### Mental disease risk prediction

- Depressive manic psychosis: IL-1β, IL-6
- Alzheimer's disease: IL-1β, IL-6, TNF-α
- Schizophrenia: IL-2, IL-6, IL-8, IL-10

Reference: 1.Mol Cell Biochem, 2011, 353:159-165. 2.N Engl J Med, 2011, 365:2055-2066. 3.Cancer Investigation, 2014, 32:197-205. 4.Clin Cancer Res, 2008, 14(21):6735-6741.

### Cytokine and immune function evaluation

Pro-inflammatory factors: IL-1B, IL-2, IL-6, IL-8, IL-17A, TNF-α, IFN-γ...

#### Anti-inflammatory factors: IL4, IL-5, IL10...

- When the level of pro-inflammatory factors increases, the body's immunity can be appropriately controlled.
- When the level of anti-inflammatory factors increases, the body's immunity needs to be strengthened.

Cytokines that change with age: IL-2, IL-6, TNF- $\alpha$ 

#### **Application Department**

ICU, Oncology, Infection, Reproductive, Respiratory, Pediatric, Hematology, Rheumatology, Immunotherapy, etc.

The rise of pro-inflammatory factors further leads to the rise of anti-inflammatory factors, which is easy to trigger

Factors are elevated, leading to immune dysfunction of the body. Anti-inflammatory and immune-enhancing treatments are

After hormone use, cytokine levels should be monitored, Evaluate the efficacy and optimize the treatment plan

#### Cardiovascular disease risk prediction

- Coronary artery disease: TNFα, IL-6
- Angina pectoris, myocardial infarction: IL-8
- Stroke, vascular disease: IL-2
- Essential hypertension: IL-1β

5. Journal of Neuroimmunology, 2015, 283:50-57.

- 6.Clinical Biochemistry, 2004, 37:673-678.
- 7.Circulation, 2010, 101(18):2149-2153.

