

# Symphony™

BIOMARKER DETECTION PLATFORM

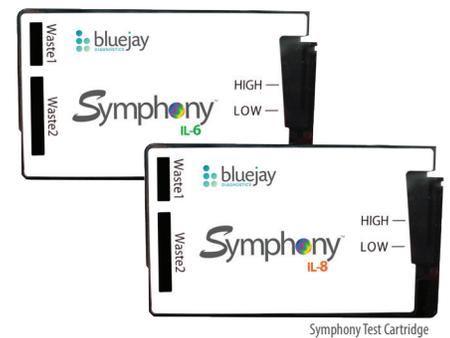
## Cytokines

Cytokines are a large diverse family of polypeptides, proteins, and glycoproteins mostly known for playing a regulatory role in the immune system response. The early identification of an increase in these biomarkers allows physicians to take immediate actions in case of emergency, trauma, sepsis, organ failures due to chemo-and radio therapy and other life-threatening diseases that wasn't possible before.

## Symphony™

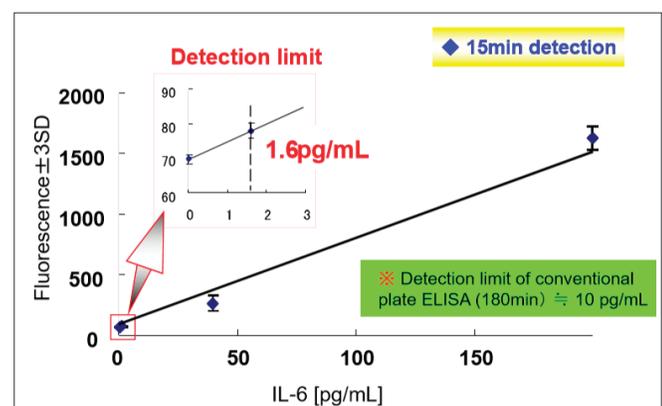
Bluejay Diagnostics is pleased to present the Symphony biomarker detection platform. The system aims to help improve healthcare outcomes by detecting and preventing cytokine-driven health scares early on.

Symphony is an innovative implementation of the traditionally reliable ELISA methodology combined with modern advances in nanotechnology. The unique design features a combination of microfluidics and interrupted fluid dynamics to offer a fast, simple, safe, and highly sensitive biomarker detection platform.



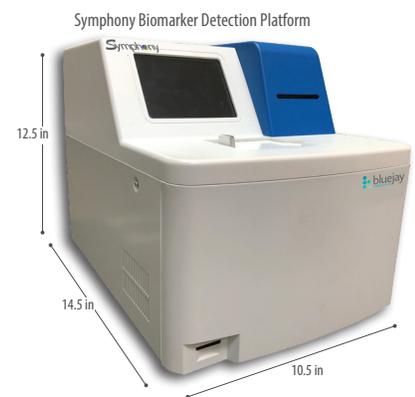
## Features and Benefits

- No preprocessing makes this platform easy to use and easily integrated with current workflows.
- Simultaneous detection of up to six samples, including the same biomarker in different samples or different biomarkers in a single sample.
- Allows physicians to take immediate actions in case of emergency, trauma, sepsis, organ failures due to chemo-and radio therapy and other
- life-threatening diseases that wasn't possible before.
- Results in 20 minutes or less enables more rapid point-of-care testing.
- Requires only 150 µl of whole blood.
- Sensitivity: 1.6 pg/ml (Comparison to ELISA sensitivity: 0.6 pg/ml less sensitive than ELISA)
- Unit of measurement: Quantitative in pg/ml
- Compact, lightweight instrument easily fits into existing workspace



## Integrated Chip and Detection Platform for liquid biopsies

| Criteria               | ELISA-Plate        | ELISA Chip                  |
|------------------------|--------------------|-----------------------------|
| Test Environment       | Laboratory         | Point-of-Care               |
| Processing time        | >24 hrs            | 20 minutes                  |
| Additional Reagents    | Required           | Integrated in the Chip      |
| Additional Instruments | Required           | None                        |
| Additional training    | Required           | None                        |
| Personnel              | Trained Technician | 8th grade science knowledge |
| Reproducibility        | High               | High                        |
| Robustness             | Robust             | Robust                      |
| Sensitivity            | High (1 pg/ml)     | High 1.6pg/ml               |



### The Role of Interleukin 6 In the Human Body

Interleukin 6 (IL-6) is from the family of cytokines that contribute to multiple physiological functions. It is mainly involved in proinflammatory functions that have important effects in adaptive immunity. Among several functions, IL-6 plays roles in the production of acute phase proteins in the liver cells, developing neurons, the maturation of megakaryocytes, and wound healing. Recent studies have also shown that elevated IL-6 levels correlate with low survival rates, and increased susceptibility to neutropenic sepsis. Elevated levels are also associated with ineffective treatment towards blunt trauma and susceptibility to multiple organ dysfunction.

### The Role of Interleukin 8 In the Human Body

Interleukin 8 (IL-8) is a proinflammatory chemokine that activates multiple signaling pathways through two cell surface G-protein coupled receptors. Increased expression of IL-8 levels have been observed in cancer cells, endothelial cells, infiltrating neutrophils and tumor associated macrophages. It has been observed that increased IL-8 levels correlate to thriving tumor environments in patients. Recent studies have also shown that an increased expression of IL-8 is associated with several cancers and one of the underlying causes of chemotherapy resistance

**To learn more about the Symphony biomarker detection platform call Bluejay at +1 978 631 4884 or e-mail [Contact@BluejayDX.com](mailto:Contact@BluejayDX.com)**

### References

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