Cytokine Testing

CPT Code: 83520 for each cytokine

Specimen Requirement:
- 1 mL plasma (EDTA plasma) or serum.
- The matrix (i.e. serum or plasma) must be specified on the test requisition form.
- Specimens should be frozen (–70º C) and shipped via overnight courier with dry ice.

Background:
Cytokines have emerged as molecules of importance in the regulation of many immunologic processes in the cell (1-4). The ability to accurately measure quantitative and qualitative differences in cytokine production is becoming increasingly important to the understanding of normal and pathological processes.

As the use of cytokine and anticytokine therapies, as well as other immunotherapy treatments increase, monitoring cytokine levels in clinical specimens will become more important. However, the clinical significance of such measurements for individual patients has not been established. None of the cytokine tests have been cleared by FDA for in vitro diagnostic use and their primary application is for research.

Units and Normal Reference Range:
When available a serum/plasma reference value will be provided with the report. However, it should be noted that these ranges are obtained from a limited population of apparently healthy adults and are not diagnostic thresholds. No reference ranges are provided for other (non-serum, non-plasma) specimens.

Method:
1. Multiplex array format with the Meso Scale Discovery Sector Imager 2400.
2. MSD cytokine assays measure from one to ten cytokines in a 96-well MULTI-SPOT plate.
3. The assay employs a sandwich immunoassay format.
4. MSD technology uses electrochemiluminescence detection; a CCD camera allows for the quantification of light emitted from each spot in each well.
5. MSD software generates a standard curve to determine sample cytokine concentrations.

Availability of Cytokine Panels. The following panels are available:

<table>
<thead>
<tr>
<th>Panel Code</th>
<th>Panel Name</th>
<th>Substance(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>#403025</td>
<td>Th1/Th2 Panel (serum)</td>
<td>IFN-γ, IL-2, IL-4, IL-5, IL-10, IL-12 p70, IL-13</td>
</tr>
<tr>
<td>#403027</td>
<td>Pro-Inflammatory Panel (serum)</td>
<td>IL-1β, TNF-α, IL-6, IL-8</td>
</tr>
<tr>
<td>#403026</td>
<td>Th1/Th2 Panel (plasma)</td>
<td>IFN-γ, IL-2, IL-4, IL-5, IL-10, IL-12 p70, IL-13</td>
</tr>
<tr>
<td>#403028</td>
<td>Pro-Inflammatory Panel (plasma)</td>
<td>IL-1β, TNF-α, IL-6, IL-8</td>
</tr>
</tbody>
</table>

Other cytokine tests may be available, please call for more information. In addition, the tests can be ordered individually.

References:
2. MSD 96-Well MULTI-ARRAY and MULTI-SPOT Human Cytokine Assays: Ultra Sensitive Kit package insert. Meso Scale Discovery

For more information, contact

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MSD Cytokine Testing_rev_100509