A diagnostic tool allowing the individual or simultaneous dosage of:

- the prescribed drug (original biological and biosimilar),
- Anti-Drug Antibodies (ADAb).

**Infliximab**

**Adalimumab**

**Etanercept**

**Cetolizumab**

**Golimumab**

**Tolizumab**

**Rituximab**

**Bevacizumab**

**Trastuzumab**

**Ustekinumab**

**LISA TRAKK KITS**

<table>
<thead>
<tr>
<th>Reference</th>
<th>Description</th>
<th>Packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>LT-451</td>
<td>Infliximab</td>
<td>3 x 50 tests</td>
</tr>
<tr>
<td>LT-453</td>
<td>Adalimumab</td>
<td>48 tests</td>
</tr>
<tr>
<td>LT-454</td>
<td>Etanercept</td>
<td>48 tests</td>
</tr>
<tr>
<td>LT-455</td>
<td>Cetolizumab</td>
<td>48 tests</td>
</tr>
<tr>
<td>LT-456</td>
<td>Golimumab</td>
<td>48 tests</td>
</tr>
<tr>
<td>LT-457</td>
<td>Tolizumab</td>
<td>48 tests</td>
</tr>
<tr>
<td>LT-458</td>
<td>Rituximab</td>
<td>48 tests</td>
</tr>
<tr>
<td>LT-459</td>
<td>Bevacizumab</td>
<td>48 tests</td>
</tr>
</tbody>
</table>


**NEW**

- **Inventory**
  - Automated (Ds2, DsX, Triturus, Evolis, etc.)
  - Rapid: 3 hours
  - Flexible formats and breakable wells
  - Ready to use reagents
  - Standardized protocols
  - A complete range of assays
  - CE marked kit

**Theradiag**

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- info@theradiag.com - www.theradiag.com
Incidence varies according to the molecules and depends on: The variability in ADAb incidence and can reach 60% for Infliximab [1]. The frequency of ADAb Biotherapies are immunogenic and trigger the production of ADAb (Anti-Drug Antibodies). Studies show variability in ADAb incidence and can reach 60% for Infliximab [1]. The frequency of ADAb Biotherapies (original products and biosimilars) have revolutionized the treatment of chronic inflammatory diseases in their rheumatic (RA, AS, RF), cutaneous (CD, UC) forms as well as the treatment of some cancers. Despite the initial 60 to 70% response rate in various pathologies, there is still a significant number of patients that are non-responders (primary non-responders), experience loss of response to the treatment (secondary resistance) or suffer from adverse effects [1].

**Pharmacokinetic (PK) of Biotherapies** Various factors affect the pharmacokinetic of the biotherapies, in particular heterogeneity of patients, their pathology, the use of other medications, and more importantly ADAb appearance. The presence of ADAb has a direct impact on the treatment efficacy by blocking the action of the drug. Furthermore, ADAb increase the clearance and reduce the drug concentration, leading to loss of clinical efficacy [5,6].

**Bioavailability and Clinical Consequences**

Published data indicate that trough drug concentration and clinical response to the treatment are closely linked [1,7,8,10,11,12,14,15,16,17]. Lower trough levels than the therapeutic threshold is associated with a loss or a partial response to the treatment and a reappearance of the clinical symptoms. Trough levels concentrations higher than the therapeutic window do not bring additional clinical benefits and increase risks of iatrogenic effects and costs of treatment [1,7,8,10,11,12,14,15,16,17].

Drug trough levels and ADAb production appear to be two parameters that enable, based on patient’s clinical status, to make rational therapeutic decisions in different clinical situations:

- Predict clinical response [1,7,10,11,12,14,15,17,25].
- Guide therapy after a treatment failure [8,14,16].
- Therapeutic switch follow-up [9].
- Predict postoperative complications [22].
- Guide treatment downscaling for patients in remission [21,24].
- Reduce treatment costs by implementing a rational decision-making patient care management [18,19,20].
- Decrease the risk of allergic reactions during the infusion or other adverse effects.

**Biologic Structure Pathologies**

<table>
<thead>
<tr>
<th>Biologic</th>
<th>Structure</th>
<th>Pathologies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infliximab</td>
<td>Chimeric</td>
<td>RA, PA, PS, CD, UC</td>
</tr>
<tr>
<td>Adalimumab</td>
<td>Human</td>
<td>RA, AS, PA, PS, CD, UC</td>
</tr>
<tr>
<td>Etanercept</td>
<td>Fusion protein</td>
<td>RA, AS, PS</td>
</tr>
<tr>
<td>Certolizumab Pegol</td>
<td>Humanized</td>
<td>RA, AS, CD (USA)</td>
</tr>
<tr>
<td>Golimumab</td>
<td>Human</td>
<td>RA, AS, PA, PS, UC</td>
</tr>
<tr>
<td>Rituximab</td>
<td>Chimeric</td>
<td>RA, NHL, CLL</td>
</tr>
<tr>
<td>Tolizumab</td>
<td>Humanized</td>
<td>RA</td>
</tr>
<tr>
<td>Bevacizumab</td>
<td>Humanized</td>
<td>mC [breast, lung, ovarian, colon, rectal]</td>
</tr>
<tr>
<td>Truxizumab</td>
<td>Humanized</td>
<td>Breast cancer, mC [breast, gastric]</td>
</tr>
<tr>
<td>Ucklizumab</td>
<td>Human</td>
<td>PA, PS</td>
</tr>
<tr>
<td>Vedolizumab</td>
<td>Humanized</td>
<td>CD, UC</td>
</tr>
</tbody>
</table>

**IMMUNODENDRY**

Biotherapies are immunogenic and trigger the production of ADAb (Anti-Drug Antibodies). Studies show variability in ADAb incidence and can reach 60% for Infliximab [1]. The frequency of ADAb incidence varies according to the molecules and depends on:

- the dose administered,
- the treatment scheme,
- the immunogenicity of each molecule, linked to their structure,
- the individual pharmacokinetic variability.

**PERSONALIZED OPTIMIZATION OF TREATMENT BY BIOTHERAPY**

Drug trough levels and ADAb production appear to be two parameters that enable, based on patient’s clinical status, to make rational therapeutic decisions in different clinical situations:

- Predict clinical response [1,7,10,11,12,14,15,17,25].
- Guide therapy after a treatment failure [8,14,16].
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