Activins, like all members of the transforming growth factor-beta superfamily, are synthesized as large pro-hormones with N-terminal pro- and C-terminal mature domains. Studies have shown that the prodomains template the dimerization of pro-activin forms, that are subsequently processed to yield pro/mature fragments. The prodomains, although important for folding and extracellular localization, must be removed prior to activity. Activin forms retaining the prodomain are biologically inactive.

Activin B, like certain other members of the TGF-β family, signals through the ActRII receptor (Activin Receptor type II). Human Activin B is a 25.6 kDa disulfide-linked homodimer consisting of two βB chains, each containing 115 amino acid residues.

Activin B exhibits a wide range of biological activities, including regulation of embryogenesis, osteogenesis, hematopoiesis, reproductive physiology and hormone secretion from the hypothalamic, pituitary and gonadal glands.

**Ansh Labs Advantage**

- Kit includes all reagents needed to run a 96-well plate, shipped at ambient temperatures and stored at 2-8°C
- no need to buy or make additional reagents

**Specific to Total Activin B**

- Does not cross-react with Activin A and Activin AB

**Analytical measurable range of approximately 12.7-1400 pg/mL**

- wide dynamic range for detection of total Activin B in studies of a variety of physiological states

- Sensitive to 4.35 pg/mL

**Long shelf-life**

- 24 months from the date of manufacture; minimizing assay lot changes for long term studies

**Accurate**

Known amounts of Activin B were added to serum and Li-Hep samples containing different levels of endogenous Activin B. The concentration of Activin B was determined before and after the addition of exogenous Activin B and the percent recovery was calculated.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Endogenous Conc. (pg/mL)</th>
<th>Expected Conc. (pg/mL)</th>
<th>Observed Conc. (pg/mL)</th>
<th>% Recovery</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>67.53</td>
<td>97.75</td>
<td>96.28</td>
<td>98%</td>
</tr>
<tr>
<td>2</td>
<td>80.31</td>
<td>77.22</td>
<td>81.16</td>
<td>105%</td>
</tr>
<tr>
<td>3</td>
<td>98.19</td>
<td>90.63</td>
<td>92.02</td>
<td>102%</td>
</tr>
<tr>
<td>4</td>
<td>88.61</td>
<td>88.51</td>
<td>88.40</td>
<td>100%</td>
</tr>
<tr>
<td>5</td>
<td>140.53</td>
<td>329.45</td>
<td>306.38</td>
<td>93%</td>
</tr>
<tr>
<td>6</td>
<td>153.38</td>
<td>340.20</td>
<td>322.52</td>
<td>95%</td>
</tr>
</tbody>
</table>

**Specific**

This monoclonal antibody pair used in the assay detects Activin B. Other related molecules at the concentration in the table did not show any significant cross-reactivity at the concentration listed in the table. This monoclonal antibody pair recognizes other species such as Rabbit, Goat, Sheep, Mouse, Bovine, Canine, Equine and Fish.

**Reliable**

Reproducibility of the Activin B assay was determined in a study using two serum pools and two kit controls. Representative data were calculated based on NCCLS EP5-A guidelines and are presented in the following table.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Mean Conc. (pg/mL)</th>
<th>Within Run</th>
<th>Between Run</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pool-1</td>
<td>190.59</td>
<td>3.44</td>
<td>3.4%</td>
<td>7.42</td>
</tr>
<tr>
<td>Control I</td>
<td>51.80</td>
<td>2.14</td>
<td>4.1%</td>
<td>1.18</td>
</tr>
<tr>
<td>Pool-2</td>
<td>241.49</td>
<td>4.45</td>
<td>1.8%</td>
<td>8.37</td>
</tr>
<tr>
<td>Control II</td>
<td>229.51</td>
<td>3.84</td>
<td>1.7%</td>
<td>5.78</td>
</tr>
</tbody>
</table>

The Difference is in the Results. Go Ahead. Test Us!
Activin B

Activin B is a useful research tool in studies related to:

- FSH stimulation
- Reproductive development
- CNS development
- Bone morphogenesis
- Wound healing
- Immune response
- Granulosa cell tumors
- Ovarian cancer
- Acute respiratory failure

**ELISA 96 Wells**

- **Method**: Quantitative three-step sandwich type immunoassay
- **Incubation Time**: Total 3.5 hour incubation at room temperature
- **Approximate Dynamic Range**: 6 points, 12.7 - 1400 pg/mL
- **Sensitivity**: 4.35 pg/mL
- **Sample Size / Type**: 25 μL / Serum, Plasma
- **Shelf-life**: 24 months

**Ordering Information**

- Activin B  96-Well ELISA  AL-150*
- Mouse Activin B  96-Well ELISA  AL-156*

Additionally, we have monoclonal antibodies to Activin A, Activin B, Inhibin A, Inhibin B, Follistatin, FSTL3 and other hormones in the TGF-beta superfamily.

Call us today or visit AnshLabs.com to see what’s new in our lab.

Ansh Labs is ISO 13485 certified for design, development, manufacturing, services and distribution of reagents/immunoassay kits for research and in vitro diagnostic applications.

*Unless otherwise stated in our catalog or other product documentation, these kits are intended for research use only and not for in vitro diagnostic purposes or therapeutic uses.

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