



## Product Datasheet

|                     |                                 |
|---------------------|---------------------------------|
| <b>Product Name</b> | Human Lambda Light Chain        |
| <b>Cata No</b>      | CB501173                        |
| <b>Source</b>       | <i>Pooled Bence Jones urine</i> |
| <b>Synonyms</b>     | Lambda Light Chain, LLC.        |

### Description

Lambda light chain is the smaller of the two types of polypeptide chains in immunoglobulins, consisting of an antigen-binding segment with a variable amino acid sequence, and a constant region with a relatively unchanging amino acid sequence. The lambda light chain gene is located on chromosome 22. The immunoglobulin heavy chains (G, A, M, D, or E) and light chains (kappa or lambda) are produced separately by the plasma cells in the bone marrow. The kappa and lambda molecules are attached to the heavy chains and whole immunoglobulins are assembled, and then conveyed to the surface of the plasma cell. Small amounts of free kappa and lambda light chains are found in the serum of healthy individuals since they are produced in excess. An accurate measurement of serum levels of free light chains in the presence of a great excess of bound light chains has been quite tricky for many years due to their identical structure. A number of diseases affect the production of free light chains by the plasma cells in the bone marrow, causing abnormal levels in the serum, urine or cerebrospinal fluid.

Lambda along with kappa light chains can be used as a tumor marker in urine.

Human Lambda light chain produced in Pooled Bence Jones urine having a molecular mass of 23 kDa.

### Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

### Purity

Greater than 96.0%

### Formulation

Lyophilized from 0.02M  $\text{NH}_4\text{HCO}_3$ .

### Reconstitution

It is recommended to reconstitute the lyophilized Human Lambda light chain in sodium acetate buffer at pH 4.0 containing 0.5M NaCl.

### Stability

Human Lambda although stable at room temperature for 3 weeks, should be stored between 2-8°C.

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