**Product datasheet**

**Human Anti-HSP60 IgG/A/M ELISA Kit ab133059**

**Overview**

**Product name**
Human Anti-HSP60 IgG/A/M ELISA Kit

**Detection method**
Colorimetric

**Precision**

<table>
<thead>
<tr>
<th>Sample</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>CV%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>16</td>
<td></td>
<td></td>
<td>&lt; 10%</td>
</tr>
</tbody>
</table>

**Sample type**
Serum

**Assay type**
Indirect

**Sensitivity**
2.88 ng/ml

**Range**
7.81 ng/ml - 250 ng/ml

**Assay time**
1h 15m

**Assay duration**
Multiple steps standard assay

**Species reactivity**
Reacts with: Human

**Product overview**
Abcam’s Human Anti-HSP60 IgG/A/M in vitro ELISA (Enzyme-Linked Immunosorbent Assay) kit is designed for the accurate quantitative measurement of Human Anti-HSP60 in Human Serum. This assay allows determination of IgG, IgA and IgM antibodies (total) to Human Hsp60 in serum.

A recombinant Human Hsp60 protein has been precoated onto 96-well plates. Standards or test samples are added to the wells, incubated and then washed. An anti-Human GAM-HRP conjugated antibody is then added and incubated. The plate is washed once more and the TMB substrate is then added which HRP catalyzes, generating a blue coloration after incubation. A stop solution is added which generates conversion to yellow color read at 450 nm which is proportional to the amount of analyte bound.

**Notes**
HSP60 is a member of the chaperonin family of heat shock proteins, with homologs functioning in the cytosol and mitochondria to fold nascent and aggregated proteins. HSP60 is the eukaryotic homolog of the *E. coli* GroEL protein, and forms a multimeric complex in the mitochondria with...
Hsp10 (Cpn10) to form a large central cavity in which ATP-dependent protein folding takes place. TRiC/CCT, a eukaryotic relative of HSP60, is expressed in the cytosol and participates in the folding of actin and tubulin substrates, but lacks any association with an Hsp10-like co-factor.

**Platform**

Microplate

**Properties**

**Storage instructions**

Store at +4°C. Please refer to protocols.

<table>
<thead>
<tr>
<th>Components</th>
<th>1 x 96 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>20X Wash Buffer Concentrate</td>
<td>1 x 100ml</td>
</tr>
<tr>
<td>Anti-Human GAM-HRP Conjugate</td>
<td>1 x 10ml</td>
</tr>
<tr>
<td>Human Anti-HSP60 IgG/A/M Microplate (12 x 8 wells)</td>
<td>1 unit</td>
</tr>
<tr>
<td>Human Anti-HSP60 Standard</td>
<td>1 x 0.12ml</td>
</tr>
<tr>
<td>Plate Sealer</td>
<td>3 units</td>
</tr>
<tr>
<td>Sample Diluent 1</td>
<td>1 x 100ml</td>
</tr>
<tr>
<td>Stop Solution 2</td>
<td>1 x 10ml</td>
</tr>
<tr>
<td>TMB Substrate</td>
<td>1 x 10ml</td>
</tr>
</tbody>
</table>

**Function**

Implicated in mitochondrial protein import and macromolecular assembly. May facilitate the correct folding of imported proteins. May also prevent misfolding and promote the refolding and proper assembly of unfolded polypeptides generated under stress conditions in the mitochondrial matrix.

**Involvement in disease**

Defects in HSPD1 are a cause of spastic paraplegia autosomal dominant type 13 (SPG13) [MIM:605280]. Spastic paraplegia is a degenerative spinal cord disorder characterized by a slow, gradual, progressive weakness and spasticity of the lower limbs. Defects in HSPD1 are the cause of leukodystrophy hypomyelinating type 4 (HLD4) [MIM:612233]; also called mitochondrial HSP60 chaperonopathy or MitCHAP-60 disease. HLD4 is a severe autosomal recessive hypomyelinating leukodystrophy. Clinically characterized by infantile-onset rotary nystagmus, progressive spastic paraplegia, neurologic regression, motor impairment, profound mental retardation. Death usually occurs within the first two decades of life.

**Sequence similarities**

Belongs to the chaperonin (HSP60) family.

**Cellular localization**

Mitochondrion matrix.

**Images**

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Representative Standard Curve using ab133059.

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