# Product datasheet

## Mouse NSE / Neuron-specific Enolase ELISA Kit

**ab233626**

- **Recombinant SimpleStep ELISA**

## Overview

### Product name
Mouse NSE / Neuron-specific Enolase 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>Mouse brain</td>
<td>5</td>
<td></td>
<td></td>
<td>7.1%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>CV%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mouse brain</td>
<td>3</td>
<td></td>
<td></td>
<td>4.2%</td>
</tr>
</tbody>
</table>

### Sample type
Cell culture supernatant, Cell culture extracts, Tissue Extracts

### Assay type
Sandwich (quantitative)

### Sensitivity
50.8 pg/ml

### Range
312.5 pg/ml - 60000 pg/ml

### Recovery
**Sample specific recovery**

<table>
<thead>
<tr>
<th>Sample type</th>
<th>Average %</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell culture extracts</td>
<td>101</td>
<td>97% - 107%</td>
</tr>
<tr>
<td>Tissue Extracts</td>
<td>115</td>
<td>113% - 118%</td>
</tr>
<tr>
<td>Cell culture media</td>
<td>89</td>
<td>92% - 98%</td>
</tr>
</tbody>
</table>

### Assay time
1h 30m

### Assay duration
One step assay

### Species reactivity
Reacts with: Mouse
**Product overview**

Mouse NSE / Neuron-specific Enolase ELISA Kit (ab233626) is a single-wash 90 min sandwich ELISA designed for the quantitative measurement of NSE / Neuron-specific Enolase protein in tissue extracts, cell culture supernatant, and cell culture extracts. It uses our proprietary SimpleStep ELISA® technology. Quantitate Mouse NSE / Neuron-specific Enolase with 50.8 pg/ml sensitivity.

SimpleStep ELISA® technology employs capture antibodies conjugated to an affinity tag that is recognized by the monoclonal antibody used to coat our SimpleStep ELISA® plates. This approach to sandwich ELISA allows the formation of the antibody-analyte sandwich complex in a single step, significantly reducing assay time. See the SimpleStep ELISA® protocol summary in the image section for further details. Our SimpleStep ELISA® technology provides several benefits:

- Single-wash protocol reduces assay time to 90 minutes or less
- High sensitivity, specificity and reproducibility from superior antibodies
- Fully validated in biological samples
- 96-wells plate breakable into 12 x 8 wells strips

A 384-well SimpleStep ELISA® microplate (ab203359) is available to use as an alternative to the 96-well microplate provided with SimpleStep ELISA® kits.

**Notes**

Abcam has not and does not intend to apply for the REACH Authorisation of customers’ uses of products that contain European Authorisation list (Annex XIV) substances. It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

**Platform**

Pre-coated microplate (12 x 8 well strips)

**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>10X Mouse Neuron-specific Enolase Capture Antibody</td>
<td>1 x 600µl</td>
</tr>
<tr>
<td>10X Mouse Neuron-specific Enolase Detector Antibody</td>
<td>1 x 600µl</td>
</tr>
<tr>
<td>10X Wash Buffer PT (ab206977)</td>
<td>1 x 20ml</td>
</tr>
<tr>
<td>5X Cell Extraction Buffer PTR (ab193970)</td>
<td>1 x 10ml</td>
</tr>
<tr>
<td>Antibody Diluent CPI - HAMA Blocker (ab193969)</td>
<td>1 x 6ml</td>
</tr>
<tr>
<td>Mouse Neuron-specific Enolase Lyophilized Recombinant Protein</td>
<td>2 vials</td>
</tr>
<tr>
<td>Plate Seals</td>
<td>1 unit</td>
</tr>
<tr>
<td>Sample Diluent NS (ab193972)</td>
<td>1 x 50ml</td>
</tr>
</tbody>
</table>
**Function**

Has neurotrophic and neuroprotective properties on a broad spectrum of central nervous system (CNS) neurons. Binds, in a calcium-dependent manner, to cultured neocortical neurons and promotes cell survival.

**Tissue specificity**

The alpha/alpha homodimer is expressed in embryo and in most adult tissues. The alpha/beta heterodimer and the beta/beta homodimer are found in striated muscle, and the alpha/gamma heterodimer and the gamma/gamma homodimer in neurons.

**Pathway**

Carbohydrate degradation; glycolysis; pyruvate from D-glyceraldehyde 3-phosphate: step 4/5.

**Sequence similarities**

Belongs to the enolase family.

**Developmental stage**

During ontogenesis, there is a transition from the alpha/alpha homodimer to the alpha/beta heterodimer in striated muscle cells, and to the alpha/gamma heterodimer in nerve cells.

**Cellular localization**

Cytoplasm. Cell membrane. Can translocate to the plasma membrane in either the homodimeric (alpha/alpha) or heterodimeric (alpha/gamma) form.

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**Images**

SimpleStep ELISA technology allows the formation of the antibody-antigen complex in one single step, reducing assay time to 90 minutes. Add samples or standards and antibody mix to wells all at once, incubate, wash, and add your final substrate. See protocol for a detailed step-by-step guide.

Background-subtracted data values (mean +/- SD) are graphed.

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<table>
<thead>
<tr>
<th>Components</th>
<th>1 x 96 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>SimpleStep Pre-Coated 96-Well Microplate (ab206978)</td>
<td>1 unit</td>
</tr>
<tr>
<td>Stop Solution</td>
<td>1 x 12ml</td>
</tr>
<tr>
<td>TMB Development Solution</td>
<td>1 x 12ml</td>
</tr>
</tbody>
</table>
Raw data values are shown in the table. Background-subtracted data values (mean +/- SD) are graphed.

The concentrations of Neuron-specific Enolase were measured in duplicate and interpolated from the Neuron-specific Enolase standard curve and corrected for sample dilution. The interpolated dilution factor corrected values are plotted (mean +/- SD, n=2). The mean Neuron-specific Enolase concentration was determined to be 40,511 pg/mL in mouse brain tissue extract and 8,858 pg/mL in Neuro-2a cell extract.

To learn more about the advantages of recombinant antibodies see here.
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