Human Metallothionein 1 ELISA Kit

SKU: HUFI02641

Datasheet:

Key features and Sample Types

Aliases:
MT1/Metallothionein 1

Uniprot:

Detection method:
Sandwich

Sample Type:
Serum, Plasma and other biological fluids

Range:
15.625-1000pg/ml

Sensitivity:
9.375 pg/ml

Storage & Expiry

ELISA Genie ELISA Kits are shipped on ice packs. Please store this ELISA Kit at 4°C. Date of expiration will be on the ELISA Box label.

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Standard dilution

1). 1000pg/ml of standard solution: Add 1 ml of Sample / Standard dilution buffer into one Standard tube, keep the tube at room temperature for 10 min and mix thoroughly.

2). 1000pg/ml → 15.625pg/ml of standard solutions: Label 6 Eppendorf tubes with 500pg/ml, 250pg/ml, 125pg/ml, 62.5pg/ml, 31.25pg/ml, 15.625pg/ml, respectively. Aliquot 300μl of the Sample / Standard dilution buffer into each tube. Add 300μl of the above 1000pg/ml standard solution into 1st tube and mix thoroughly. Transfer 300μl from 1st tube to 2nd tube and mix thoroughly. Transfer 300μl from 2nd tube to 3rd tube and mix thoroughly, and so on.

DILUTION SERIES

<table>
<thead>
<tr>
<th>300μl</th>
<th>300μl</th>
<th>300μl</th>
<th>300μl</th>
<th>300μl</th>
<th>300μl</th>
<th>Blank</th>
</tr>
</thead>
<tbody>
<tr>
<td>500pg/ml</td>
<td>250pg/ml</td>
<td>125pg/ml</td>
<td>62.5pg/ml</td>
<td>31.25pg/ml</td>
<td>15.625pg/ml</td>
<td></td>
</tr>
</tbody>
</table>

Note: The standard solutions are best used within 2 hours. The standard solution series should be kept at 4°C for up to 12 hours. Or store at -20 °C for up to 48 hours. Avoid repeated freeze-thaw cycles.
Typical Data & Standard Curve
Results of a typical standard run of Human Metallothionein 1 ELISA Kit are shown below. This standard curve was generated at our lab for demonstration purpose only. Each user should obtain their own standard curve as per experiment.

Specificity
This assay has high sensitivity and excellent specificity for detection of Human Metallothionein 1. No significant cross-reactivity or interference between Human Metallothionein 1 and analogues was observed.

Recovery
Matrices listed below were spiked with Human Metallothionein 1 and the recovery rates were calculated by comparing the measured value to the expected amount of Human Metallothionein 1 in samples.

<table>
<thead>
<tr>
<th>Matrix</th>
<th>Recovery range (%)</th>
<th>Average (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serum (n=5)</td>
<td>86-103</td>
<td>94</td>
</tr>
<tr>
<td>EDTA plasma (n=5)</td>
<td>85-100</td>
<td>91</td>
</tr>
<tr>
<td>UFH plasma (n=5)</td>
<td>86-100</td>
<td>92</td>
</tr>
</tbody>
</table>
Linearity

The linearity of the kit was assayed by testing samples spiked with appropriate concentration of Human Metallothionein 1 and their serial dilutions.

<table>
<thead>
<tr>
<th>Sample</th>
<th>1:2</th>
<th>1:4</th>
<th>1:8</th>
<th>1:16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serum (n=5)</td>
<td>89-99%</td>
<td>87-105%</td>
<td>88-104%</td>
<td>86-100%</td>
</tr>
<tr>
<td>EDTA plasma (n=5)</td>
<td>84-96%</td>
<td>82-97%</td>
<td>86-97%</td>
<td>84-101%</td>
</tr>
<tr>
<td>UFH plasma (n=5)</td>
<td>80-99%</td>
<td>81-99%</td>
<td>80-100%</td>
<td>82-99%</td>
</tr>
</tbody>
</table>

Precision

- **Intra-assay Precision (Precision within an assay):** 3 samples with low, middle and high level Human Metallothionein 1 were tested 20 times on one plate, respectively.
- **Inter-assay Precision (Precision between assays):** 3 samples with low, middle and high level Human Metallothionein 1 were tested on 3 different plates, 8 replicates in each plate.
- **CV (%):** SD/mean X 100
- **Intra-Assay:** CV<8%
- **Inter-Assay:** CV<10%

Stability

The stability of the Human Metallothionein 1 ELISA Kit is determined by the loss rate of activity. The loss rate of this kit is less than 10% within the expiration date under appropriate storage conditions.

<table>
<thead>
<tr>
<th>Standard (n=5)</th>
<th>37°C for 1 month</th>
<th>4°C for 6 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average (%)</td>
<td>80</td>
<td>95-100</td>
</tr>
</tbody>
</table>

To minimize extra influence on the performance, operation procedures and lab conditions, especially room temperature, air humidity, incubator temperature should be strictly controlled. It is also strongly suggested that the whole assay is performed by the same operator from the beginning to the end.

Contact Details:

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