**31700 Human PM20D1 immunoassay kit**

**Introduction of molecule**

PM20D1 is a bidirectional N-fatty-acyl amino acid synthase/hydrolase that regulates the production of N-fatty-acyl amino acids. These metabolites are endogenous chemical uncouplers of mitochondrial respiration. In an UCP1-independent manner, maybe through interaction with mitochondrial transporters, they promote proton leakage into the mitochondrial matrix. PM20D1 may indirectly regulate the bodily dissipation of chemical energy as heat through thermogenic respiration.

**Performance and characteristics of assay**

**A. Typical representation of standard curve**

The following standard curve is provided for demonstration only. A standard curve should be generated for each set of sample assay.

 Human PM20D1 standard curve （4 parameters）



|  |  |  |
| --- | --- | --- |
| Human PM20D1(ng/ml) | Absorbance (450 nm) | Blanked Absorbance |
| 0 | 0.105 | 0 |
| 0.39 | 0.131 | 0.03 |
| 0.78 | 0.139 | 0.043 |
| 1.56 | 0.162 | 0.079 |
| 3.125 | 0.25 | 0.202 |
| 6.25 | 0.505 | 0.404 |
| 12.5 | 0.846 | 0.809 |
| 25 | 1.74 | 1.615 |

**B. Sensitivity:**

The lowest level of human PM20D1 that can be measured by this assay is 0.209 ng/ml.

**C. Precision:**

Intra-assay Precision (Precision within an assay) < 3.7%.

Inter-assay Precision (Precision between assays) < 3.8%.

**D. Spike**

Serum samples were assayed by adding 90 µl of

sample and 10 µl of spike stock solution calculated

to yield the intended 0, 1.25, 5 or 20 ng/ml spike

concentration

|  |  |  |  |
| --- | --- | --- | --- |
| Spike level | Expected(ng/ml) | Observed(ng/ml) | Recovery (%) |
| Low spike (1.25 ng/ml) | 1.25 | 1.22 | 98 |
| Medium spike (5 ng/ml) | 5 |  5.32 | 106.5 |
| High spike (20 ng/ml) | 20 | 18.65 | 93.2 |

**E. Specificity:** Nocross reactivity with recombinant mouse PM20D1 protein

**F. Linearity:** To assess the linearity of the assay, samples containing and/or spiked with high concentrations of human PM20D1 were serially diluted with the 1×Assay buffer to produce samples with values within the dynamic range of the assay.

|  |  |  |  |
| --- | --- | --- | --- |
|  Sample 1 |  |  |  |
| Dilution | Measured (ng/ml) | Expected (ng/ml) | Recovery (%) |
| 1/2 | 10.11 | 9.51 | 106.3 |
| 1/4 | 4.91 | 4.9 | 100.2 |
| 1/8 | 2.56 | 2.69 | 95.2 |

**G. Sample :** Serum and plasma

**H. Storage :** 4°C