PARKINSON'S PROGRESSION MARKERS INITIATIVE

Play a Part in Parkinson's Research

Hemoglobin assay

Peggy Taylor, BioLegend

PPMI Project ID: 134

Summary

The concentration of hemoglobin in CSF samples collected for PPMI were analyzed using an ELISA assay comprising reagents obtained from Bethyl Laboratories (cat # E80-134).

Method

The method of analysis is a sandwich type ELISA that utilizes a colorimetric readout. The reference standards used in the assay ranged from 2-125 ng/ml. The concentration of hemoglobin in each sample was determined by interpolation of values against the standard curve established by the reference standards using a 4-parameter regression. Each sample was analyzed in duplicate at1:10 dilution. Not all CSF samples reported values within the quantitative range of the assay. In the data set samples denoted below should be considered to have hemoglobin concentrations < 20 ng/ml and samples denoted 'above' should be considered to have hemoglobin concentrations > 1250 ng/ml.

On each plate 2 CSF samples spiked with hemoglobin (Fisher cat # 23-666-304*) were included as QC samples. The 'high spike' QC sample was run in duplicate at 1:150 dilution and the 'low spike' QC sample was run in duplicate at 1:30 dilution. The interpolated values, adjusted for dilution factor, were compared across the plates used in this analysis. Plate acceptance criteria were set as: Replicate standard curve calibrators must be less than 15% CV.*

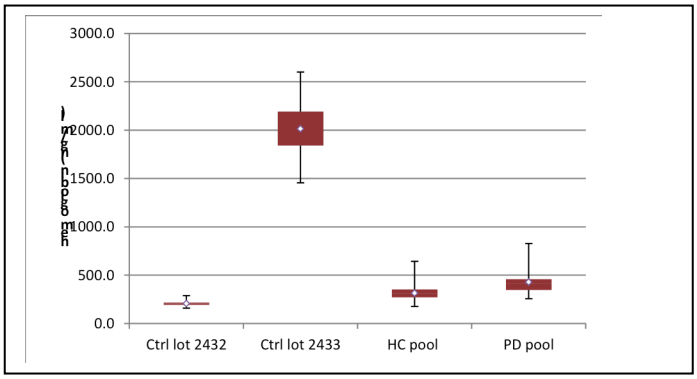

Figure 1: Performance of QC samples and reference pools across all plates reported in PPMI analysis. The box and whisker plot demonstrates the performance of the QC samples and reference pools across 87 plates reported in the PPMI dataset. QC sample 'lot 2432' had an expected nominal hemoglobin concentration of 206 ng/ml. Across the 87 plates reported in this data set the mean value and standard deviation for 'lot 2432' was 206 +/- 23 pg/ml.

QC sample 'lot 2433' had an expected nominal hemoglobin concentration of 1981 ng/ml. Across the 87 plates reported in this data set the mean value and standard deviation for 'lot 2433' was 2014 +/- 233 ng/ml. The mean value +/- standard deviation of hemoglobin reported for the HC pool and PD pools were 314 +/- 76 ng/ml and 482 +/- 115 ng/ml, respectively.

PARKINSON'S PROGRESSION MARKERS INITIATIVE

Play a Part in Parkinson's Research

References

1. Bethyl Laboratories product page http://www.bethyl.com/product/E80-134/Human_Hemoglobin_ELISA_Quantitation_Set?referrer=pca_a-z&target=Hemoglobin

About the Authors

This document was prepared by **Peggy Taylor, BioLegend**. For more information please contact **Peggy Taylor** at **(781) 915-5205** or by email at **ptaylor@biolegend.com.**