Peters Plus Syndrome: \textit{B3GLCT} Gene Deletion/Duplication

\textbf{Test Code:} DB3QA  
\textbf{Turnaround time:} 2 weeks  
\textbf{CPT Codes:} 81228 x1

\section*{Condition Description}

Peters plus syndrome is characterized by developmental delay/intellectual disability, disproportionate short stature, cleft lip and/or palate, and anterior chamber eye anomalies with the most common being Peters' anomaly. Typical facial features include a cupid's bow-shaped upper lip, narrow palpebral fissures, a prominent forehead, and a long philtrum. Mutations in the \textit{B3GLCT} gene (13q12.3) cause the autosomal recessive Peters plus syndrome. Many individuals with Peters plus syndrome have the common c660+1G>A mutation in the \textit{B3GLCT} gene. Sequencing analysis is recommended before deletion/duplication analysis.

\section*{References:}

- GeneReviews
- OMIM \#610308: \textit{B3GLCT} gene
- OMIM \#261540: Peters plus syndrome

\section*{Genes}

\textit{B3GLCT}

\section*{Indications}

This test is indicated for:

\begin{itemize}
  \item Confirmation of a clinical diagnosis of Peters plus syndrome in an individual in whom sequence analysis was negative.
  \item Carrier testing in adults with a family history of Peters plus syndrome in whom sequence analysis was negative.
\end{itemize}

\section*{Methodology}

DNA isolated from peripheral blood is hybridized to a CGH array to detect deletions and duplications. The targeted CGH array has overlapping probes which cover the entire genomic region.

\section*{Detection}

Detection is limited to duplications and deletions. The CGH array will not detect point or intronic mutations. Results of molecular analysis must be interpreted in the context of the patient's clinical and/or biochemical phenotype.

\section*{Specimen Requirements}

\textit{Submit only 1 of the following specimen types}

\subsection*{Type: Whole Blood (EDTA)}

\textbf{Specimen Requirements:}  
EDTA (Purple Top)  
Infants and Young Children (2 years of age to 10 years old): 3-5 ml  
Older Children & Adults: 5-10 ml  
Autopsy: 2-3 ml unclotted cord or cardiac blood

\textbf{Specimen Collection and Shipping:}  
Ship sample at room temperature for receipt at EGL within 72 hours of collection. Do not freeze.

\subsection*{Type: DNA, Isolated}

\textbf{Specimen Requirements:}  
Microtainer  
3\mu g  
Isolation using the Perkin Elmer™Chemagen™ Chemagen™ Automated Extraction method or Qiagen™ Puregene kit for DNA extraction is recommended.

\textbf{Specimen Collection and Shipping:}  
Refrigerate until time of shipment in 100 ng/\mu L in TE buffer. Ship sample at room temperature with overnight delivery.

\section*{Related Tests}

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- Sequence analysis for the B3GLCT gene is also available.
- Custom diagnostic mutation analysis (KM) is available to family members if mutations are identified by targeted mutation testing or sequencing analysis.
- Prenatal testing is available only for known familial mutations to individuals who are confirmed carriers of mutations. Please contact the laboratory genetic counselor to discuss appropriate testing prior to collecting a prenatal specimen.