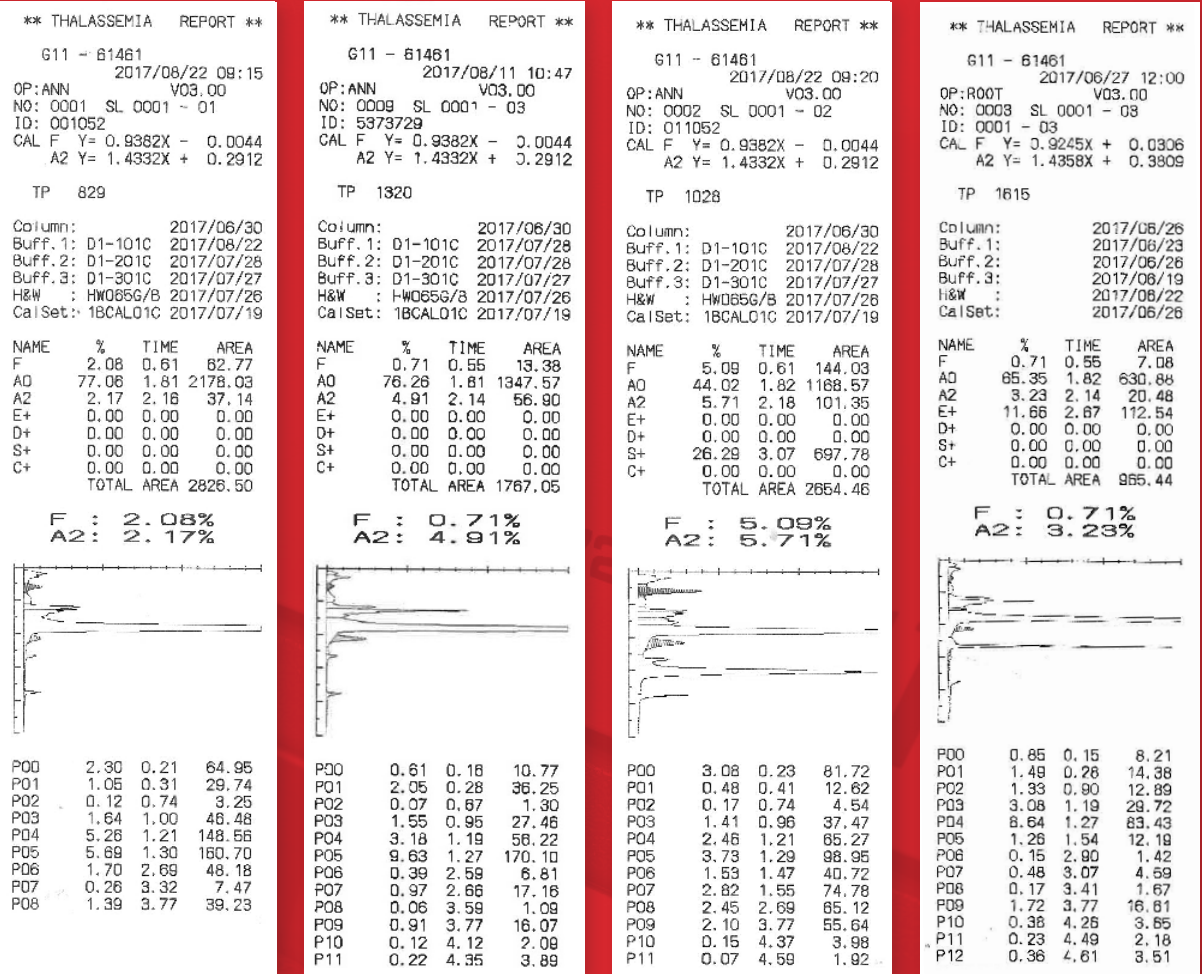


# CHROMATOGRAM INTERPRETATION AIDS

- Software to assist in the interpretation of chromatograms
- Tosoh Bioscience offers an on-line clinical interpretation platform under the supervision of highly knowledgeable experts in the field

Example chromatograms: Normal,  $\beta$ -Thalassaemia trait, HbS trait, HbE trait



## References

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3. Weatherall DJ, Clegg JB. 2001. The thalassaemia syndromes. 4th Edition. Oxford: Blackwell Science Ltd 2001
4. Thein SL. The molecular basis of  $\beta$ -thalassaemia. Cold Spring Harb Perspect Med. 2013 May 1;3<sup>(5)</sup>
5. Cao A, Kan YW. The prevention of thalassemia. Cold Spring Harb Perspect Med. 2013 Feb 1;3<sup>(2)</sup>



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## HLC-723G11 $\beta$ -THALASSAEMIA ANALYSIS MODE THE ULTIMATE HAEMOGLOBINOPATHY SOLUTION FOR YOUR LAB

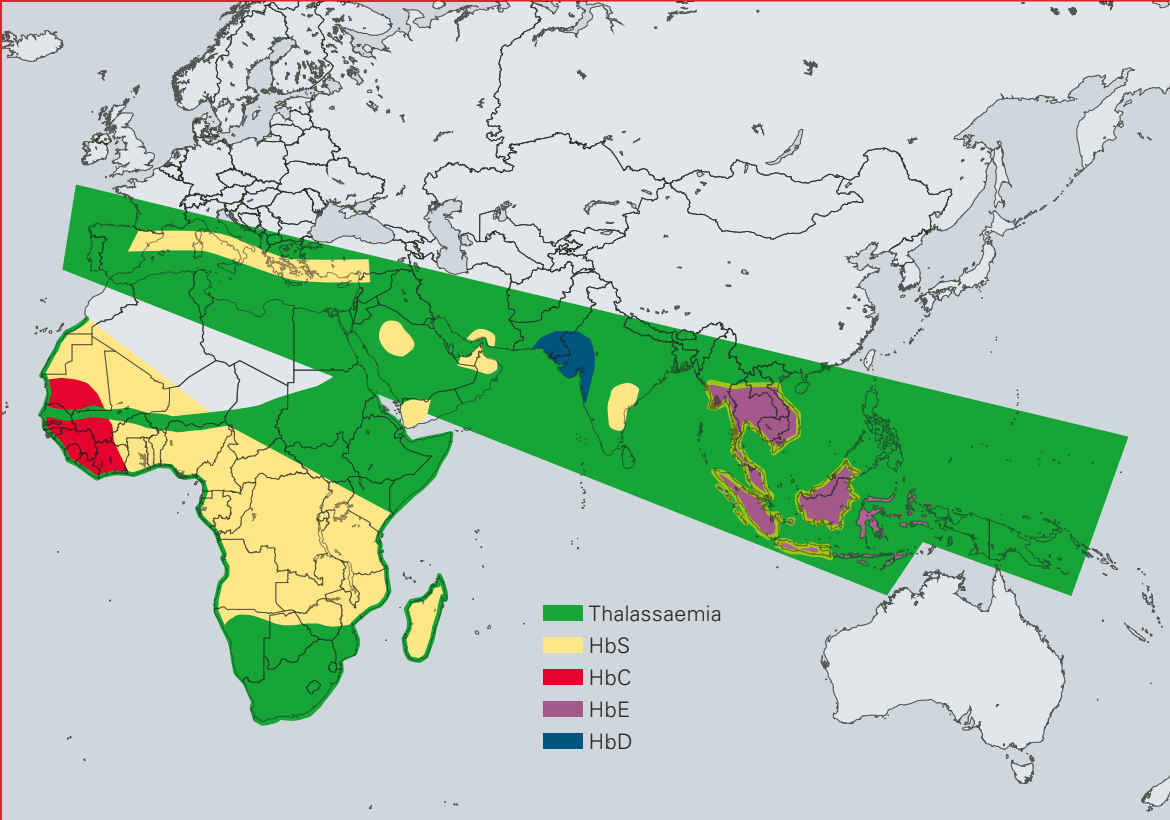


G11 bThal EN Rev 10062017 - 10-2017

# TOSOH BIOSCIENCE



Haemoglobinopathies are among the most common hereditary diseases of the world’s population. About 4.5% of all human beings carry a gene for a thalassaemia or haemoglobin anomaly<sup>(1)</sup>. The areas in which such abnormalities were originally most common extend from Africa over the Mediterranean basin and the Near- and Middle East to Southeast Asia and the Indian subcontinent. Global migration in the modern period has led to a continual spread of these anomalies to all regions of the world, with the result that they are rapidly becoming more common in the industrialised regions of Northern and Central Europe as well<sup>(2)</sup>.



Variants of thalassaemias and main abnormal haemoglobins interact to produce a wide range of clinical disorders of varying severity<sup>(3-4)</sup>. Homozygotes for  $\beta$ -thalassaemia may develop either thalassaemia major or thalassaemia intermedia. Individuals with thalassaemia major are usually diagnosed within the first 2 years of life and require regular blood transfusions to survive<sup>(5)</sup>.

## LABORATORY DIAGNOSIS

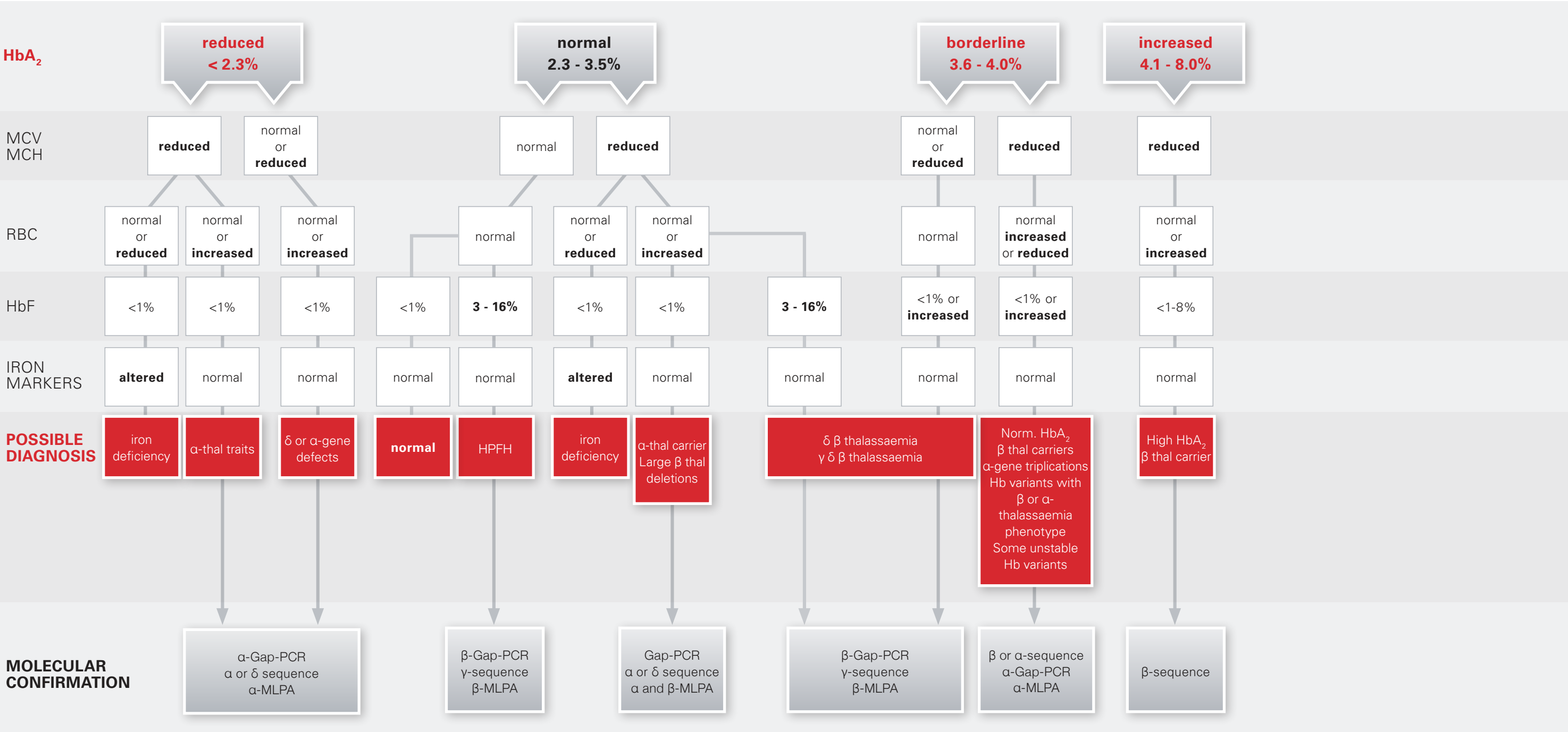
Diagnosis of Beta-Thalassaemia and other types of haemoglobinopathies should be done based on clinical symptoms (if available) and a number of laboratory tests, such as MCV, MCH, total red cell count, HbF, HbA2 and iron markers.

## TOSOH G11 BETA-THALASSAEMIA SOLUTION



- Quantitative determination of HbF and HbA2 in 5 minutes
- Chromatographic separation between HbA2 and HbE
- High resolution chromatogram thanks to Tosoh’s over 40 years’ experience in HPLC
- Full reagent traceability
- Easy to use and intuitive instrument
- Highly reliable system
- Instrument connectable to open laboratory automation lines

As a guideline, the below scheme can be used (Adapted from Mosca et al. J.Clin.Pathol. 2009 – with permission)



MLPA: Multiplex ligation-dependent probe amplification