

## XL TLX3 BA

Break Apart Probe

Order No.:  
D-5129-100-OG

### Description

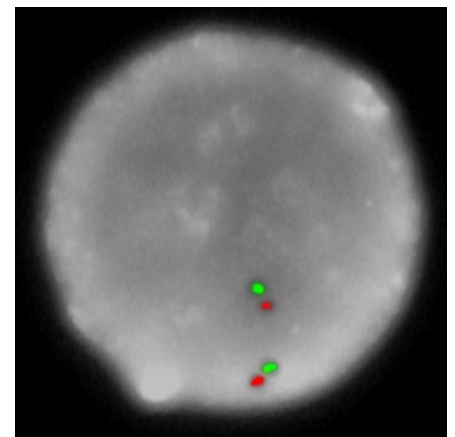
XL TLX3 BA is designed as a break apart probe. The orange labeled probe hybridizes proximal to the breakpoint in the TLX3 gene region at 5q35, the green labeled probe hybridizes distal to the breakpoint.

### Clinical Details

Acute lymphoblastic leukemia (ALL) is the most common childhood cancer type. T-cell acute lymphoblastic leukemia (T-ALL) is an aggressive and quickly progressing type of ALL affecting T-lymphocytes. Genomic data suggests that more than 10 functional aberrations are contributing to the development of this disease. T-ALL cases can be grouped by distinct genetic profiles and the aberrant expression of a characteristic transcription factor. Major subgroups are characterized by ectopic expression of TAL1, TLX1, TLX3, HOXA9/10, LMO2 or NKX2-1 and others as a result of chromosomal rearrangements or mutations. About 20 % of childhood T-ALL cases are characterized by aberrant expression of TLX3 as a result of  $t(5;14)(q35;q32)$ . This cryptic translocation juxtaposes TLX3, normally not expressed in T-cells, with the BCL11B gene which is active in T-cells and results in ectopic expression of TLX3. Fluorescence in situ hybridization is a valuable method for the detection of  $t(5;14)(q35;q32)$  since cryptic translocations may escape during classical cytogenetic analysis. Furthermore, the broad range of breakpoints in the chromosomal region 14q32 makes the development of efficient PCR-based methods difficult.

#### Literature:

- Van Zutven et al (2004) Haematologica 89:671-678
- Su et al (2006) Blood 108:4198-4201
- Girardi et al (2017) Blood 129:1113-1123

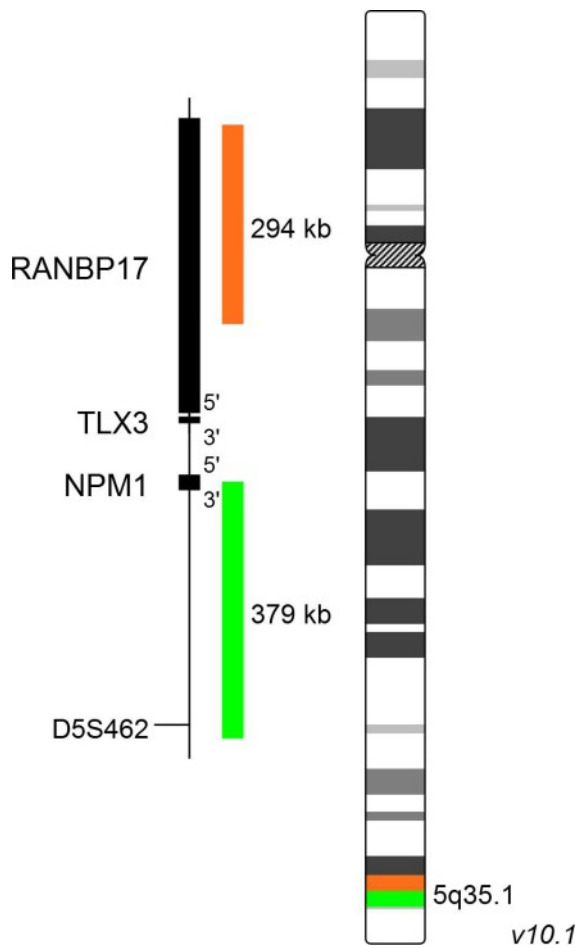


*XL TLX3 BA hybridized to normal lymphocytes. One normal interphase is shown. The expected normal signal pattern of XL TLX3 BA is two orange-green colocalization/fusion signals representing the two normal TLX3 loci. Translocations as  $t(5;14)(q35;q32)$  are separating one orange-green colocalization/fusion resulting in one green, one orange and one orange-green colocalization/fusion signal.*

#### Clinical Applications:

- ALL

# FACTSHEET



## MetaSystems Probes

### MetaSystems Probes GmbH (Headquarters)

1. Industriestrasse 7  
68804 Altlusheim, Germany  
tel +49 6205 2927 60 | fax +49 6205 2927 29  
info@metasystems-probes.com

### MetaSystems Group, Inc.

70 Bridge Street  
Newton, MA 02458, USA  
tel +1 6179 2499 50 | fax +1 6179 2499 54  
info@metasystems.org

### MetaSystems S.r.l.

Via Gallarate 80  
20151 Milano, Italy  
tel +39 0236 7587 51 | fax +39 0245 3753 03  
info@metasystems-italy.com

### MetaSystems India Pvt., Ltd.

No. 1/1, 1st Floor, 1st Main Rd., 2nd cross  
Thimmaiah Garden, R T Nagar  
Bangalore Karnataka, 560 032, India  
tel +91 9535 7788 01  
info@metasystems-india.com

### MetaSystems Asia Co., Ltd.

Unit 108, 1/F, Bio-Informatics Centre  
No. 2 Science Park West Avenue  
Hong Kong Science Park  
Shatin, New Territories, Hong Kong  
tel +852 2587 8333 | fax +852 2587 8334  
info@metasystems-asia.com

Document No. PFS-D5129-2018-02-01-S  
© 2018 by MetaSystems Probes

## Further Information or Request Assistance

Please do not hesitate to contact us if you have any questions or if you need technical support.

[www.metasystems-probes.com/CONTACT](http://www.metasystems-probes.com/CONTACT)

# FACTSHEET