



Test Catalog

Diagnostic. Prognostic. Predictive. Predisposition.



Anaplastic Large Cell Lymphoma FISH Panel

Alternative Name

ALCL, Peripheral T-cell lymphoma (PTCL)

Methodology

FISH

Test Description

Probes: ALK (2p23) | TP63 (3q28) | TBL1XR1/TP63 [inv(3)(q26q28)] | DUSP22-IRF4 (6p25.3) Probes may be ordered separately except TP63 (3q28) and TBL1XR1/TP63 [inv(3)(q26q28)] are performed combined and reported as co-dependent for result and interpretation of TP63 rearrangement status.

Disease(s): Anaplastic Large Cell Lymphoma (ALCL), peripheral T-cell lymphoma (PTCL)

Clinical Significance

The ALCL FISH Panel is used for the detection of recurrent chromosome abnormalities observed in patients with anaplastic large cell lymphoma (ALCL) which may classify those patients into specific risk groups. This panel includes ALK (2p23) rearrangement testing. Patients with ALK-positive ALCL have a favorable prognosis compared to ALK-negative ALCL patients. This panel also includes two assays to detect TP63 rearrangements. Rearrangements of the TP63 gene encoding p63 fusion defines a subset of ALK-negative ALCL cases and are associated with aggressive course and poor outcome as compared to peripheral T-cell lymphoma without these rearrangements. The TBL1XR1/TP63 fusion [inv(3)] has also been reported in rare cases of peripheral T-cell lymphoma NOS, mycosis fungoides, diffuse large B-cell lymphoma (DLBCL) and follicular lymphoma. This panel also includes the DUSP22-IRF4 rearrangement test which has been reported in CD30-positive, ALK-negative ALCL and is associated with favorable clinical outcome. DUSP22-IRF4 rearrangements have been also reported in patients with lymphomatoid papulosis (LyP).

Specimen Requirements

- **Bone Marrow Aspirate:** N/A Peripheral Blood: N/A
- **Fresh, Unfixed Tissue:** N/A
- **Fluids:** N/A
- **Paraffin Block:** H&E slide (required) plus paraffin block. Circle H&E for tech-only.
- **Cut Slides:** H&E slide (required) plus 4 unstained slides cut at 4 microns. Circle H&E for tech only.

Storage & Transportation

Use cold pack for transport, making sure cold pack is not in direct contact with specimen.

CPT Code(s)*

88374x4 automated or 88377x4 manual

New York Approved

Yes

Level of Service

Technical, Global

Turnaround Time

3-5 days

References

1. Pederson MB, Hamilton Dutoit SJ, Bendix K, et al. DUSP22 and TP63 rearrangements predict outcome of ALK-negative anaplastic large cell lymphoma: a Danish cohort study. *Blood*. 2017; 130:554-557.
2. Parrilla Castellar ER, Jaffe ES, Said JS, et al. ALK-negative anaplastic large cell lymphoma is a genetically heterogeneous disease with widely disparate clinical outcomes. *Blood*. 2014; 124:1473-1480.
3. Wada DA, Law ME, Hsi ED, et al. Specificity of IRF4 translocations for primary cutaneous anaplastic large cell lymphoma: a multicenter study of 204 skin biopsies. *Mod Pathol*. 2011; 24:596-605.
4. Peterson JF, Pearce KE, Meyer RG, et al. Fluorescence in-situ hybridisation for TP63 rearrangements in T cell lymphomas: single-site experience of 470 patients and implications for clinical testing. *Histopathology*. 2020;76(3):481-485. PMID: 31557339.

*The CPT codes provided with our test descriptions are based on AMA guidelines and are for informational purposes only. Correct CPT coding is the sole responsibility of the billing party.

Please direct any questions regarding coding to the payor being billed.

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9490 NeoGenomics Way
Fort Myers, FL 33912
Phone: 239.768.0600/ Fax: 239.690.4237
neogenomics.com

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