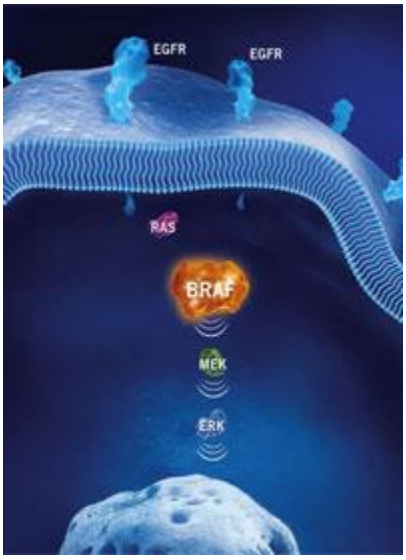
BRAF Mutation Analysis



Clinical use

- Determine the *BRAF* V600E mutation status of a tumor

Clinical Background

Mutant BRAF has been implicated in the pathogenesis of several cancers, including melanoma, non-small cell lung cancer, colorectal cancer, papillary thyroid cancer, and ovarian cancer. Mutant BRAF has been observed in these cancers as well as glioma and gastrointestinal stromal tumor (GIST). The V600E mutation results in an amino acid substitution at position 600 in BRAF, from a valine (V) to a glutamic acid (E). This mutation occurs within the activation segment of the kinase domain (Figure 1). Approximately 80–90% of V600 BRAF mutations are V600E.

Specimen type

- Room temperature Formalin-fixed paraffin embedded tissue

Method

- Real-time Polymerase Chain Reaction amplification (real-time PCR)

Interpretation

- Wild Type (No Mutation Detected) – Reference range
- V600E Mutation (Mutation Detected)

References

Lovly, C., L. Horn, W. Pao. 2015. BRAF. *My Cancer Genome*http://www.mycancergenome.org/content/disease/melanoma/braf/?tab=0 (Updated June 16).