

**MOLECULAR EVALUATION:**

We use a companion FDA approved diagnostic kit for studying 11 mutations in the phosphatidylinositol 3-kinase catalytic subunit alpha (PIK3CA) gene using genomic DNA (gDNA) extracted from formalin-fixed, paraffin-embedded (FFPE) breast tumor tissue or circulating tumor DNA (ctDNA) from plasma.

Exon 7: C420R;

Exon 9: E542K, E545A, E545D, E545G, E545K, Q546E, Q546R

Exon 20: H1047L, H1047R, H1047Y

PIK3CA gene-functional domains

PIK3CA gene subunits

Adaptor BD

Ras BD

Exon7  
C420R

C2 domain

Exon9

C542K  
E545K/A/D/G  
Q546R/E

Helical domain

Exon20

H2047R/L/Y

Kinase domain