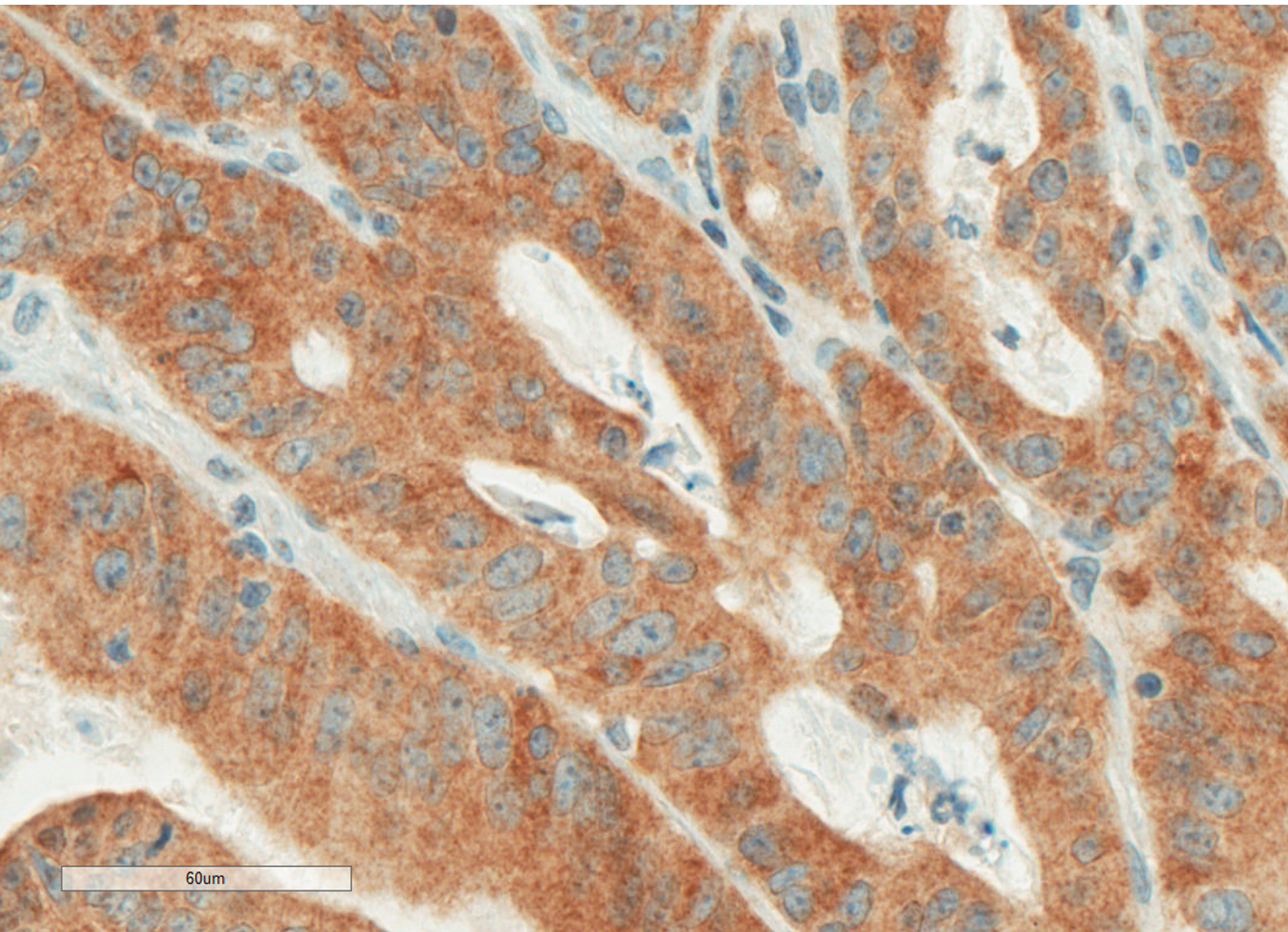
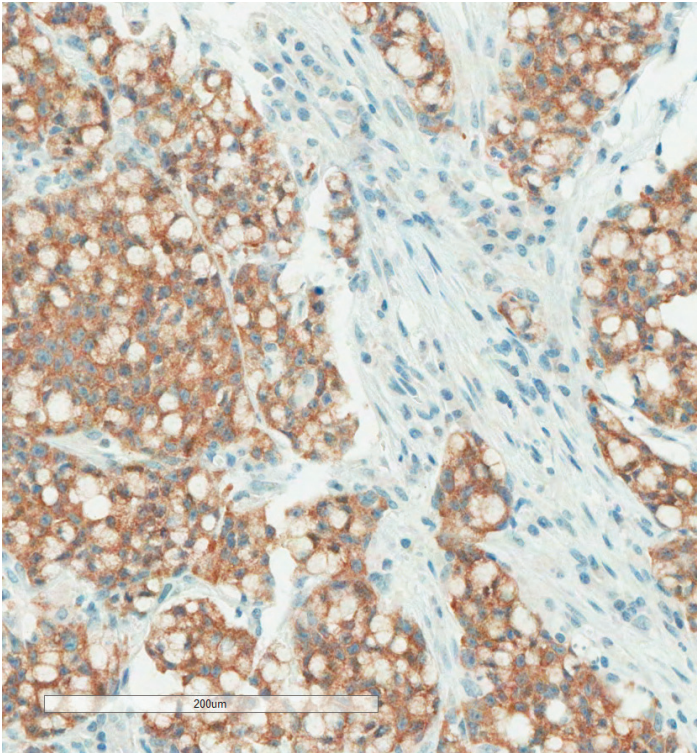


BRAF V600E (VE1)

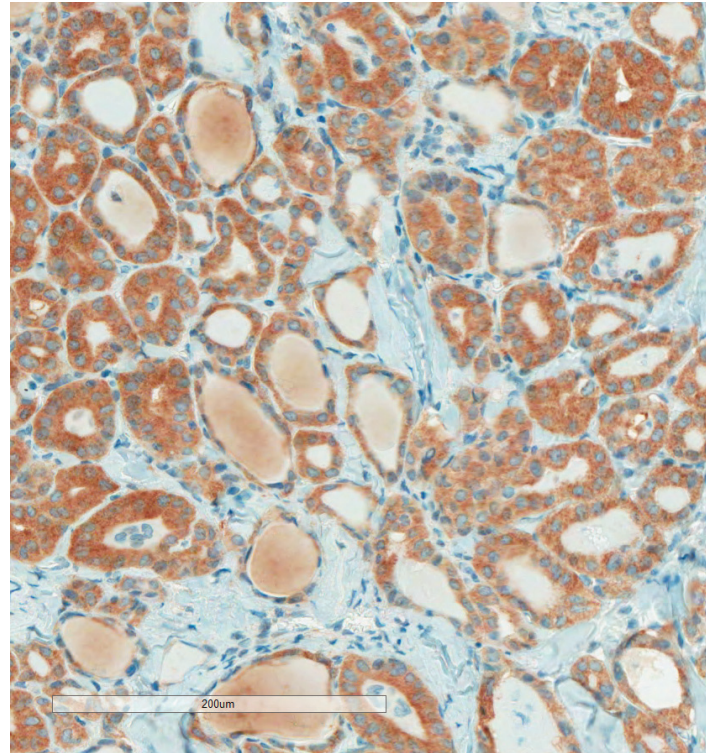
Mouse Monoclonal Primary Antibody

The BRAF V600E (VE1) antibody is the first ready-to-use IVD IHC antibody that empowers you to evaluate the expression of BRAF V600E mutation with clinical confidence using the OptiView DAB IHC Detection Kit.





Colorectal carcinoma positive with BRAF V600E (VE1) IHC with OptiView DAB IHC detection



Papillary thyroid carcinoma positive with BRAF V600E (VE1) IHC with OptiView DAB IHC detection

BRAF V600E (VE1) Antibody

The BRAF V600E (VE1) antibody is a sensitive and specific antibody used for the detection of the BRAF V600E mutation at the single cell level in a variety of cancers.³ V600E is the most common activating mutation of BRAF.² BRAF V600E is a clinically significant mutation in several cancers, including colorectal and papillary thyroid (Table 1).³

High sensitivity and specificity

- 98.9% concordance rate between BRAF V600E (VE1) IHC and Sanger sequencing¹⁰
- 100% sensitivity and 98.8% specificity in MSI-H colorectal cancers with the BRAF V600E (VE1) antibody¹⁰
- Reliable and specific method for detection of the BRAF V600E mutation in papillary thyroid carcinoma⁸
- Single cell-level resolution

Improve turnaround time and efficiency

- Fast turnaround time compared to existing molecular methods
- Fully automated, ready-to-use reagents achieve timely results in your anatomic pathology lab

One test for a variety of cancers

- Over 95% of all BRAF mutations are of the V600E type²
- Detects the BRAF V600E mutant protein in colorectal, thyroid and other cancers

Product Specifications

BRAF V600E (VE1)

Mouse Monoclonal Primary Antibody (50 tests)

Catalog Number: 790-4855 [06918727001](#)

Automation: Optimized for use on all VENTANA

BenchMark IHC/ISH staining instruments

Detection: Optimized with OptiView DAB IHC

Detection Kit

BRAF and BRAF V600E mutations

BRAF is a gene that leads to the creation of a protein called B-RAF, which is involved in sending signals in cells and in cell growth. This gene may be mutated (changed) in many types of cancer, which causes a change in the B-RAF protein. This can increase the growth and spread of cancer cells. The BRAF gene located on chromosome 7q34 encodes a cytoplasmic serine-threonine kinase that acts upstream of the mitogen-activated protein kinase (MAPK) signaling pathway. Activating mutations in the kinase domain of the BRAF gene leads to constitutive activation of the MAPK signaling pathway. MAPK signaling pathway activation drives increased cell proliferation and resistance to apoptosis — key mechanisms in driving cancer formation.⁷

V600E is the most common mutation of BRAF, caused by a substitution of valine to glutamic acid at the position 600 of the amino acid sequence. Activating mutations of BRAF are common in both benign and malignant tumors.⁷

BRAF mutations by cancer

Colorectal cancer

BRAF V600E detection in MLH1-deficient patients is used in conjunction with the MMR panel. Accurate detection of the BRAF V600E mutation, which is strongly associated with sporadic origin, plays an important role in helping differentiate between sporadic microsatellite-unstable (MSI-H) and hereditary colorectal cancer.⁴ BRAF V600E (VE1) has demonstrated high sensitivity, specificity and concordance with existing methods of testing in colorectal cancer.^{1,6}

Papillary thyroid cancer

The BRAF V600E mutation is associated with diagnosis of papillary thyroid cancer.⁵ The use of molecular markers such as BRAF may be considered for patients with indeterminate cytology on FNA to help guide management.⁹ The IHC detection of the mutated BRAF V600E protein has been found to be a reliable and specific method for detection of the BRAF V600E mutation in papillary thyroid carcinoma.⁸

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Table 1: BRAF mutations & BRAF V600E prevalence by disease state

Cancer	% with BRAF mutations	% that are BRAF V600E mutations
Colorectal	5–15 ³	>90 ⁴
Papillary thyroid	40–70 ²	>98 ⁵

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