

# PRODUCT INFORMATION

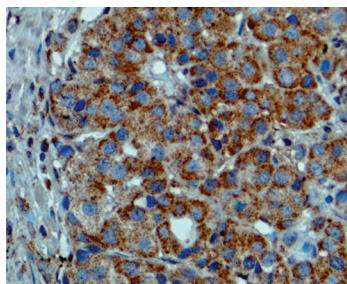
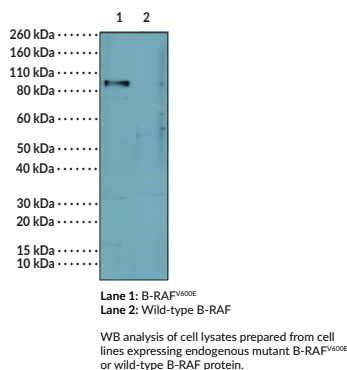
## B-RAF<sup>V600E</sup> Monoclonal Antibody (Clone RM8)

Item No. 32188

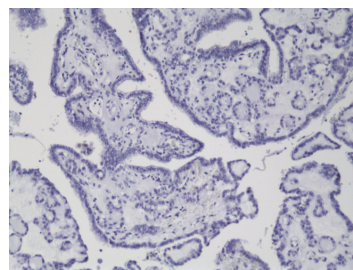
### Overview and Properties

<b>Contents:</b>	This vial contains 100 µg of protein A-affinity purified monoclonal antibody.
<b>Synonyms:</b>	B-RAF Proto-oncogene, Proto-oncogene B-RAF, RAFB1, Serine/Threonine Kinase, V-Raf Murine Sarcoma Viral Oncogene Homolog B
<b>Immunogen:</b>	Peptide corresponding to B-RAF <sup>V600E</sup>
<b>Cross Reactivity:</b>	(+) B-RAF <sup>V600E</sup> ; (-) Wild-type B-RAF
<b>Species Reactivity:</b>	(+) Human
<b>Form:</b>	Liquid
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	≥1 year
<b>Storage Buffer:</b>	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
<b>Concentration:</b>	1 mg/ml
<b>Clone:</b>	RM8
<b>Host:</b>	Rabbit
<b>Isotype:</b>	IgG
<b>Applications:</b>	ELISA, Immunocytochemistry (ICC), Immunohistochemistry (IHC), and Western blot (WB); the recommended starting concentration for ELISA and WB is 0.5-2 µg/ml and 0.5-5 µg/ml for ICC and IHC. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

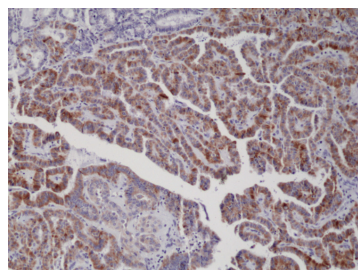
### Images



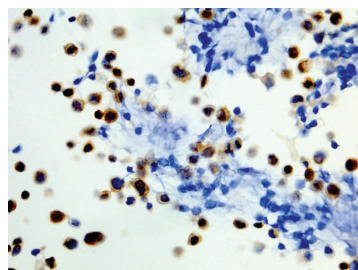
Immunohistochemical staining of formalin-fixed and paraffin-embedded melanoma tissue sections.



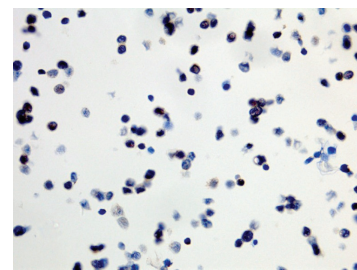
Immunohistochemical staining of formalin-fixed and paraffin-embedded thyroid carcinoma tissue. Allele-specific PCR validated to be negative for B-RAF<sup>V600E</sup>.



Immunohistochemical staining of formalin-fixed and paraffin-embedded thyroid carcinoma tissue. Allele-specific PCR validated to be positive for B-RAF<sup>V600E</sup>.



Immunohistochemical staining of formalin-fixed and paraffin-embedded human cell line sections. WiDr cells (400X, positive).



Immunohistochemical staining of formalin-fixed and paraffin-embedded human cell line sections. SW40 cells (400X, negative).

**WARNING**  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

**SAFETY DATA**  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

**WARRANTY AND LIMITATION OF REMEDY**  
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## Description

Rapidly accelerated fibrosarcoma (Raf) kinase is a serine/threonine kinase and component of the MAPK/ERK signaling pathway.<sup>1,2</sup> Upon activation by upstream RAS signaling, Raf dimerizes and phosphorylates MEK1 leading to activation of transcription factors for cell growth, proliferation, and survival.<sup>2</sup> Raf exists as three isoforms, A-RAF, B-RAF, and C-RAF, that all consist of three conserved regions (CRs) with domain-specific functions.<sup>1</sup> CR1 contains a cysteine-rich domain and a RAS-binding domain, CR2 is essential for negative regulation through inhibition of phosphorylation sites, and CR3 is the kinase domain. B-RAF is the most prominent isoform, expressed in most tissues, and localized to the cytosol. A single amino acid substitution of glutamic acid for valine at codon 600 in the kinase domain (B-RAF<sup>V600E</sup>) is an activating mutation that is found in melanoma and non-small cell lung cancer (NSCLC), as well as breast, thyroid, colorectal, and ovarian cancers.<sup>1,2</sup> B-RAF<sup>V600E</sup> is associated with early-stage ovarian cancer, as well as with increased risk of brain metastasis and shorter survival in melanoma.<sup>1,3</sup> Cayman's B-RAF<sup>V600E</sup> Monoclonal Antibody (Clone RM8) can be used for ELISA, immunocytochemistry (ICC), immunohistochemistry (IHC), and Western blot (WB) applications.

## References

1. Chavda, J. and Bhatt, H. Systemic review on B-Raf<sup>V600E</sup> mutation as potential therapeutic target for the treatment of cancer. *Eur. J. Med. Chem.* **206**, 112675 (2020).
2. Frisone, D., Friedlaender, A., Malapelle, U., *et al.* A BRAF new world. *Crit. Rev. Oncol. Hematol.* **152**, 103008 (2020).
3. Patel, H., Yacoub, N., Mishra, R., *et al.* Current advances in the treatment of BRAF-mutant melanoma. *Cancers (Basel)* **12(2)**, 482 (2020).

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