

## Precision IVD Antibodies for Anatomic Pathology

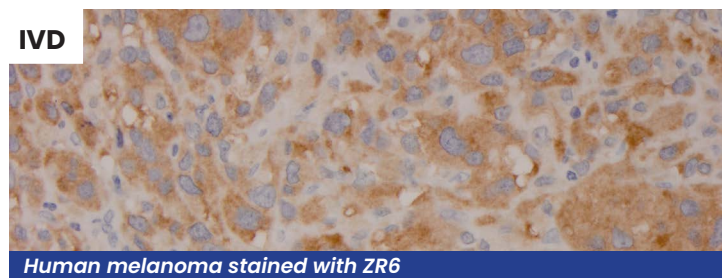
### NEW PRODUCT FOCUS -- Spring 2024

#### BRAF (V600E)

(rabbit monoclonal; clone ZR6) Cat#: **Z2811**

The *BRAF* gene encodes a protein that is part of the *RAS-RAF-MEK-ERK* signaling pathway, which regulates cell division and proliferation. The V600E mutation in the *BRAF* gene leads to the production of a constitutively active BRAF protein, resulting in uncontrolled cell growth and division. Identifying the presence of this mutation is crucial for diagnosing and guiding the treatment of certain cancers.

Zeta clone ZR6 is used in IHC to detect the V600E mutation commonly associated with various cancers, including melanoma, colorectal cancer, and certain types of thyroid cancer, lung cancer, and Hairy cell leukemia. Clone ZR6 specifically binds to the mutated BRAF protein, allowing pathologists to detect it in cancer tumor specimens for further classification and diagnosis. [Learn more...](#)

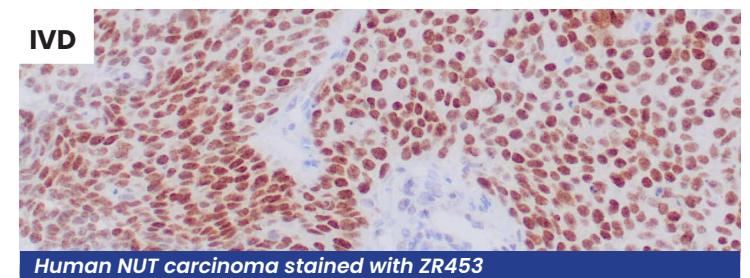


#### NUT

(rabbit monoclonal; clone ZR453) Cat#: **Z2810**

The term NUT antibody refers to an antibody used to detect a protein called NUT (Nuclear Protein in Testis). The NUT protein is involved in various cellular processes, and its abnormal expression has been associated with certain cancers, particularly NUT carcinoma. NUT carcinoma is a rare and aggressive type of cancer that primarily affects the thoracic and head and neck regions. It is characterized by the presence of a NUT fusion gene, typically resulting from a chromosomal translocation.

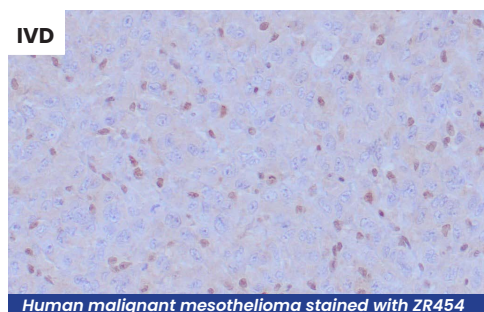
NUT antibody staining is nuclear with >90% of cells positive, and the reported sensitivity is 87% and the specificity is 100%. NUT is variably expressed among germ cell tumors, including dysgerminoma (60–90%), immature teratoma (75%), and spermatocytic seminoma (100%). [Learn more...](#)



#### BAP1

(rabbit monoclonal; clone ZR454) Cat#: **Z2813**

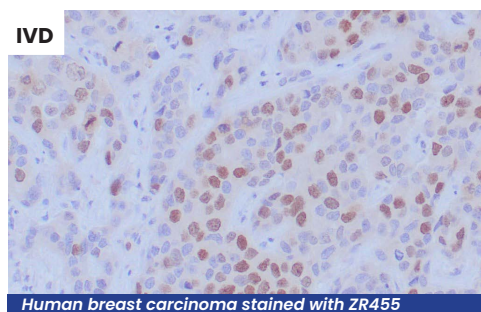
BAP1 (BRCA1-Associated Protein 1) binds to BRCA1 and is a tumor suppressor believed to mediate its effects via chromatin modulation, transcriptional regulation, and possibly the ubiquitin-proteasome system and DNA damage response pathway. Germline mutations of BAP1 are involved in uveal melanoma, epithelioid atypical Spitz tumors, cutaneous melanoma, and mesothelioma. Somatic BAP1 mutations are seen in cutaneous melanocytic tumors (epithelioid atypical Spitz tumors and melanoma), uveal melanoma, mesothelioma, clear cell renal cell carcinoma, and other tumors. BAP1 immunohistochemistry is useful in differentiating malignant mesothelioma (nuclear negative) vs. reactive mesothelial proliferation (nuclear positive). [Learn more...](#)



#### BRCA-1

(rabbit monoclonal; clone ZR455) Cat#: **Z2812**

The *BRCA-1* gene codes a nuclear phosphoprotein that plays a role in maintaining genomic stability and acts as a tumor suppressor. Mutations of *BRCA-1* genes have been linked to an increased risk of developing breast and ovarian cancers. Individuals with certain mutations in BRCA1 may have a higher likelihood of developing these cancers compared to those without the mutations. BRCA1 IHC is commonly used in research and clinical settings and provides valuable information about the status of the BRCA1 protein in cancerous and non-cancerous tissues. Changes in BRCA1 expression can be associated with certain types of breast and ovarian cancers, and this information may be used in the diagnosis, prognosis, and treatment planning for patients. [Learn more...](#)



#### CD33

(mouse monoclonal; clone PWS44) Cat#: **Z2367**

CD33 is involved in cell-cell interactions, signaling, and modulation of immune cell function. Zeta clone PWS44 may be useful for cases of acute myeloid leukemia, minimally differentiated (AML-M0) and acute monocytic leukemia (AML-M5), in which other paraffin section markers of myeloid differentiation (i.e. anti-myeloperoxidase) may be negative. All cases of myeloid sarcoma in this study showed anti-CD33 positivity in myeloid and monocytic subsets, allowing for easy interpretation. The excellent sensitivity and specificity for myelomonocytic lineage makes PWS44 a diagnostic marker for myeloid sarcoma and may be useful in determining CD33 expression on previous paraffin-embedded material if flow cytometry studies were not initially performed in patients with acute leukemia. [Learn more...](#)

