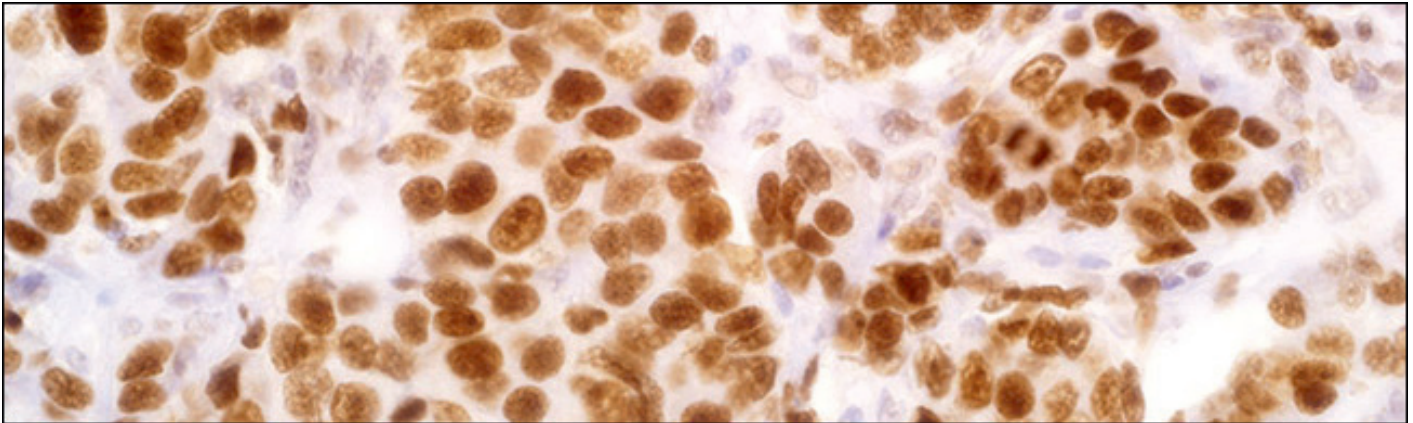




EZH2 (Clone 11, Mouse)

- epigenetic and prognostic marker for a wide range of solid tumours¹⁻³
- strong and independent prognostic factor for prostate carcinomas¹

EZH2, a histone methyltransferase, is a catalytic subunit of polycomb repressive complex 2 (PRC2) which mediates the transcriptional repression of target genes via trimethylation of histone H3 at lysine 27. This mark, abbreviated as H3K27me3, is an epigenetic signal that plays an important role in the gene silencing of tumour suppressor genes. The PRC2 complex functions as an essential regulator of the self-renewal of embryonic and tissue-specific stem cells. The dynamic regulation of PRC2 activity plays a key role in the development and differentiation of tissues, for example in the activation and differentiation of B-cells (germinal centres).

A wide range of tumours display overexpression of EZH2, a phenomenon that is associated with an aggressive phenotype, metastasis formation, treatment resistance and poor prognosis.¹⁻³ Activating somatic (gain-of-function) EZH2 mutations (Y641) have been noted in follicular lymphomas (11%) and diffuse large B-cell lymphomas (>20%, GCB-DLBCL, germinal centre B-cell subtype). Inhibitors of EZH2 are in clinical development.^{4-6, 11, 13, 14}

Fields of application: **general pathology**,¹⁻³ **haematopathology** (DLBCL prognostic marker, follicular lymphomas, mantle cell lymphomas),^{7-8, 11, 13-14, 16} **dermatopathology** (aggressive/non-pigmented melanomas are commonly EZH2-positive),¹⁰ and **cytopathology** (EZH2 has been described as a universally useful marker of malignancy).⁹

Neoplasm	EZH2 415M-1	P504s 504R-1	PSA 324M-1	GATA3 390M-1	GCDFP-15 257M-1	CDX-2 235R-1	TTF-1 343R-1	Napsin A 352R-1	CD45 145M-9
Prostate adenocarcinoma	+	+	+	-	-	-	-	-	-
Breast carcinoma	+	-	-	+	+	-	-	-	-
Colorectal adenocarcinoma	+	-	-	-	-	+	-	-	-
Lung adenocarcinoma	+/-	-	-	-	-	-	+	+	-
Lymphoma	+	-	-	+	-	-	-	-	+
Sarcoma	-	-	-	-	-	-	-	-	-



Ordering Information

Antibody	Clone	Species	Dilution	Concentrate			Ready to use/RTU	
				0.1 ml	0.5 ml	1.0 ml	1 ml	7 ml
CD45	2B11+PD7/26	Mouse	100-500	145M-94	145M-95	145M-96	145M-97	145M-98
Cdx2	EPR2764Y	Rabbit	100-500	235R-14	235R-15	235R-16	235R-17	235R-18
EZH2	11	Mouse	25-100	415M-14	415M-15	415M-16	415M-17	415M-18
GATA3	L50-823	Mouse	100-500	390M-14	390M-15	390M-16	390M-17	390M-18
GCDFP-15	23A3	Mouse	50-200	257M-14	257M-15	257M-16	257M-17	257M-18
GCDFP-15	EP1582Y	Rabbit	25-100	257R-14	257R-15	257R-16	257R-17	257R-18
Napsin A	EP205	Rabbit	100-500	352R-14	352R-15	352R-16	352R-17	352R-18
Napsin A	MRQ-60	Mouse	100-500	352M-94	352M-95	352M-96	352M-97	352M-98
P504s (AMACR)	13H4	Rabbit	50-200	504R-14	504R-15	504R-16	504R-17	504R-18
PSA	EP109	Rabbit	100-200	AC-0070A	-	AC-0070	-	-
TTF-1	EP229	Rabbit	50-200	343R-14	343R-15	343R-16	343R-17	343R-18

For further markers please see the current Cell Marque [catalogue](#) and the associated [supplement](#) on our website www.medac-diagnostika.de; Information; Immunohistochemistry, Catalogues.

Status: IVD

Species: Mouse, monoclonal

Clone: 11

Isotype: IgG1

Immunoreactivity: Nuclear

Tissue pre-treatment: Tris/EDTA pH 8 (20-30 min 95-99°C, e.g. Trilogy, 920P-07)

Positive control tissue: Prostate adenocarcinoma, tonsil, breast carcinoma

Dilution recommendation: 1:25-1:100 (e.g. medac antibody dilution buffer, B1-31C)

EZH2 references:

1. Melling N, et al. Overexpression of enhancer of zeste homolog 2 (EZH2) characterizes an aggressive subset of prostate cancers and predicts patient prognosis independently from pre- and postoperatively assessed clinicopathological parameters. *Carcinogenesis* 2015; 36: 1333-1340.
2. Deb G, et al. Multifaceted role of EZH2 in breast and prostate tumorigenesis: epigenetics and beyond. *Epigenetics* 2013; 8: 464-476.
3. Yamaguchi H, Hung MC. Regulation and role of EZH2 in cancer. *Cancer Res Treat* 2014; 46: 209-222.
4. McCabe MT, Creasy CL. EZH2 as a potential target in cancer therapy. *Epigenomics* 2014; 6: 341-351.
5. Verma SK, Knight SD. Recent progress in the discovery of small-molecule inhibitors of the HMT EZH2 for the treatment of cancer. *Future Med Chem* 2013; 5: 1661-1670.
6. Kondo Y. Targeting histone methyltransferase EZH2 as cancer treatment. *J Biochem* 2014; 156: 249-257.
7. Berg T, et al. A transgenic mouse model demonstrating the oncogenic role of mutations in the polycomb-group gene EZH2 in lymphomagenesis. *Blood* 2014; 123: 3914-3924.
8. Lund K, et al. EZH2 in normal and malignant hematopoiesis. *Leukemia* 2014; 28: 44-49.
9. Jiang H, et al. EZH2, a unique marker of malignancy in effusion cytology. *Diagn Cytopathol* 2014; 42: 111-116.
10. Tiffen J, et al. EZH2: an emerging role in melanoma biology and strategies for targeted therapy. *Pigment Cell Melanoma Res* 2015; 28: 21-30.
11. Intlekofer AM, Younes A. Precision therapy for lymphoma - current state and future directions. *Nat Rev Clin Oncol* 2014; 11: 585-596.
12. Bohers E, et al. Activating somatic mutations in diffuse large B-cell lymphomas: lessons from next generation sequencing and key elements in the precision medicine era. *Leuk Lymphoma* 2015; 56: 1213-1222.
13. Melnick A. Epigenetic therapy leaps ahead with specific targeting of EZH2. *Cancer Cell* 2012; 22: 569-570.
14. Heyn H, Esteller M. EZH2: an epigenetic gatekeeper promoting lymphomagenesis. *Cancer Cell* 2013; 23: 563-565.
15. Cavalli G. EZH2 goes solo. *Science* 2012; 338: 1430-1431.
16. Weblink: <http://shop.cellmarque.com/antibodies/EZH2-11.asp>