

## BACKGROUND

The enhancer of zeste homolog 2 (EZH2) is a member of the polycomb group of genes (PcG), which are important for transcriptional regulation through nucleosome modification, chromatin remodeling, and interaction with other transcription factors. EZH2 is the catalytic subunit of Polycomb repressive complex 2 (PRC2) also including EED and SUZ2, which is a highly conserved histone methyltransferase that targets lysine-27 of histone H3.<sup>1</sup> This methylated H3-K27 chromatin mark is commonly associated with silencing of differentiation genes in organisms ranging from plants to flies to humans. Disruption of EZH2 expression may lead to dysregulation of genes critical for the G2-M transition.<sup>2</sup> Studies on human tumors show that EZH2 is frequently over-expressed in a wide variety of cancerous tissue types, including prostate and breast.<sup>3</sup> Although the mechanistic contributions of EZH2 to cancer progression are not yet determined, functional links between EZH2-mediated histone methylation and DNA methylation suggest partnership with the gene silencing machinery implicated in tumor suppressor loss. EZH2 expression itself is controlled by E2F transcription factors, which are downstream of the retinoblastoma protein (Rb), and is also involved in p53-regulated cell cycle control.<sup>4</sup>

### References:

1. Chen X et al.: Mol. Cell, 32:491-502, 2008.
2. Burdach S et al.: Cell Cycle 8:1991-6, 2009.
3. Backmann IM et al.: J. Clin. Onco. 24: 268-273, 2006.
4. Tang X et al.: Oncogene 23:5759-69, 2004.

## TECHNICAL INFORMATION

### Source:

EZH2 Antibody is a mouse monoclonal antibody raised against the recombinant human EZH2 protein expressed in *E. coli*.

### Specificity and Sensitivity:

This affinity purified antibody detects endogenous levels of EZH2 proteins in various cell lysates.

**Storage Buffer:** PBS and 30% glycerol

### Storage:

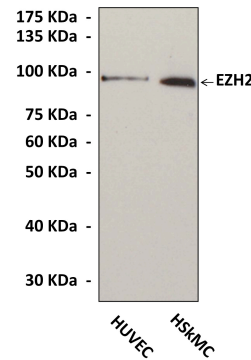
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

## APPLICATIONS

Application:	*Dilution:
WB	1:1000
IP	n/d
IHC (Paraffin)	n/d
ICC	n/d
FACS	n/d

*\*Optimal dilutions must be determined by end user.*

## QUALITY CONTROL DATA



Various cell lysates were subjected to Western Blot analysis using EZH2 Antibody.

