

# Phospho-Desmoplakin (Ser165/166) Antibody



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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H M R Mk	Endogenous	320, 250	Rabbit	#P15924	1832

## Product Usage Information

### Application

Western Blotting

### Dilution

1:1000

## Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

## Specificity/Sensitivity

Phospho-Desmoplakin (Ser165/166) Antibody recognizes endogenous levels of desmoplakin protein only when phosphorylated at Ser165/166.

## Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser165/166 of human desmoplakin protein. Antibodies are purified by protein A and peptide affinity chromatography.

## Background

Desmosomes are a class of intracellular junctions that tightly link adjacent cells in mechanically stressed tissues such as the epithelium and myocardium (1). They derive their characteristic strength from the protein desmoplakin, which acts as a tether by binding the cytoplasmic component of the desmosome at its N-terminus (2) while its C-terminus is anchored to the intermediate-filament cytoskeleton (3). This association mitigates the impact of mechanical forces on the desmosome by distributing them throughout the cytoskeleton and tissue (4). Desmoplakin is essential for normal desmosomal adhesion (5); defects can result in pathologies that include cardiomyopathy (6), keratoderma (7), or the skin blistering disease Epidermolysis bullosa (8).

Phospho-Desmoplakin (Ser165/166) Antibody is directed against a site that was identified at Cell Signaling Technology (CST) using PTMScan®, our LC-MS/MS platform for modification site discovery. Please visit PhosphoSitePlus®, a modification site knowledgebase developed and maintained by CST, at [www.phosphosite.org](http://www.phosphosite.org) for more information.

## Background References

1. Stokes, D.L. (2007) *Curr Opin Cell Biol* 19, 565-71.
2. Kowalczyk, A.P. et al. (1997) *J Cell Biol* 139, 773-84.
3. Meng, J.J. et al. (1997) *J Biol Chem* 272, 21495-503.
4. Green, K.J. and Simpson, C.L. (2007) *J Invest Dermatol* 127, 2499-515.
5. Vasioukhin, V. et al. (2001) *Nat Cell Biol* 3, 1076-85.
6. Rampazzo, A. et al. (2002) *Am J Hum Genet* 71, 1200-6.
7. Armstrong, D.K. et al. (1999) *Hum Mol Genet* 8, 143-8.
8. Jonkman, M.F. et al. (2005) *Am J Hum Genet* 77, 653-60.

## Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

## Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

## Applications Key

**W:** Western Blotting

## Cross-Reactivity Key

**H:** Human **M:** Mouse **R:** Rat **Mk:** Monkey

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