

#3984 Store at -20°C

Keratin 17/19 (D32D9) XP® Rabbit mAb



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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IHC-P	H M R Mk	Endogenous	48/41	Rabbit IgG	#Q04695, #P08727	3872, 3880

Product Usage Information

Application

Western Blotting
Immunohistochemistry (Paraffin)

Dilution

1:1000
1:300

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity / Sensitivity

Keratin 17/19 (D32D9) XP® Rabbit mAb detects endogenous levels of keratin 17 and keratin 19 proteins.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to amino acids near the amino terminus of human keratin 17 and human keratin 19.

Background

Keratins (cytokeratins) are intermediate filament proteins that are mainly expressed in epithelial cells. Keratin heterodimers composed of an acidic keratin (or type I keratin, keratins 9 to 23) and a basic keratin (or type II keratin, keratins 1 to 8) assemble to form filaments (1,2). Keratin isoforms demonstrate tissue- and differentiation-specific profiles that make them useful as research biomarkers (1). Research studies have shown that mutations in keratin genes are associated with skin disorders, liver and pancreatic diseases, and inflammatory intestinal diseases (3-6). Keratin 17 is involved in wound healing and cell growth, two processes that require rapid cytoskeletal remodeling (7). Keratinocytes deficient in keratin 17 exhibit abnormal Akt/mTOR signaling and fail to produce an increase in translation, cell size, or growth; these cells also exhibit abnormal 14-3-3σ localization. As 14-3-3σ typically associates with keratin 17, these results imply that Akt/mTOR signaling results in sequestration of 14-3-3σ with keratin 17 in the cytosol, which is required for translation and cell growth. Phosphorylation of keratin 17 on Ser44 may provide a docking site for 14-3-3σ binding (8).

Background References

1. Moll, R. et al. (1982) *Cell* 31, 11-24.
2. Chang, L. and Goldman, R.D. (2004) *Nat Rev Mol Cell Biol* 5, 601-13.
3. Ramaekers, F.C. and Bosman, F.T. (2004) *J Pathol* 204, 351-4.
4. Lane, E.B. and McLean, W.H. (2004) *J Pathol* 204, 355-66.
5. Zatloukal, K. et al. (2004) *J Pathol* 204, 367-76.
6. Owens, D.W. and Lane, E.B. (2004) *J Pathol* 204, 377-85.
7. Paladini, R.D. et al. (1996) *J. Cell Biol.* 132, 381-397.
8. Kim, S. et al. (2006) *Nature* 441, 362-365.

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

WB: Western Blotting **IHC-P:** Immunohistochemistry (Paraffin)

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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