

#13089 Store at -20°C

## RUNX3/AML2 (D9K6L) Mouse mAb



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3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB, IP, IF-IC	H M R	Endogenous	43-48	Mouse IgG2b	#Q13761	864

### Product Usage Information

#### Application

Western Blotting  
Immunoprecipitation  
Immunofluorescence (Immunocytochemistry)

#### Dilution

1:1000  
1:50  
1:400 - 1:800

### 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

RUNX3/AML2 (D9K6L) Mouse mAb recognizes endogenous levels of total RUNX3 protein.

### Source / Purification

Monoclonal antibody is produced by immunizing animals with recombinant protein surrounding Gly217 of human Runx3 protein.

### Background

Runt-related transcription factor 3 (RUNX3, AML2), a member of the Runt family of transcription factors, plays an important role in the suppression of gastric epithelium cell proliferation (1), dorsal root ganglia neurogenesis (2), and T cell differentiation (3,4). RUNX3 is also involved in caspase-3-dependent apoptosis (5). Protein complexes containing RUNX3 and various transcription factors, such as Smads or β-catenin/TCF4, have tumor suppressor activity and regulate downstream target gene transcription (6,7). While typically localized to the nucleus, RUNX3 can be tyrosine phosphorylated and located in the cytoplasm of many cancer cells. This mislocalization of RUNX3 abolishes its tumor suppressor function and contributes to tumorigenesis (8). Research studies indicate that gene silencing or protein mislocalization inactivates RUNX3 in more than 80% of gastric cancers and other cancer types (1,9,10).

### Background References

1. Li, Q.L. et al. (2002) *Cell* 109, 113-24.
2. Inoue, K. et al. (2002) *Nat Neurosci* 5, 946-54.
3. Taniuchi, I. et al. (2002) *Cell* 111, 621-33.
4. Woolf, E. et al. (2007) *Dev Biol* 303, 703-14.
5. Zhai, F.X. et al. (2012) *J Cancer Res Clin Oncol* 138, 439-49.
6. Chi, X.Z. et al. (2005) *Mol Cell Biol* 25, 8097-107.
7. Ito, K. et al. (2008) *Cancer Cell* 14, 226-37.
8. Goh, Y.M. et al. (2010) *J Biol Chem* 285, 10122-9.
9. Blyth, K. et al. (2005) *Nat Rev Cancer* 5, 376-87.
10. Ito, K. et al. (2005) *Cancer Res* 65, 7743-50.

### 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 **IP:** Immunoprecipitation **IF-IC:** Immunofluorescence (Immunocytochemistry)

### 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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