Revision 8

RUNX3/AML2 (D6E2) Rabbit mAb

#9647 Store at -20C

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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:
W, IP, IHC-P, FC-FP	H M R	Endogenous	43-48	Rabbit IgG	#Q13761	864

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50
Immunohistochemistry (Paraffin)	1:50 - 1:200
Flow Cytometry (Fixed/Permeabilized)	1:100 - 1:400

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.

For a carrier free (BSA and azide free) version of this product see product #86441.

Specificity/Sensitivity

RUNX3/AML2 (D6E2) Rabbit mAb recognizes endogenous levels of both isoforms of RUNX3 protein. This antibody recognizes mouse RUNX3/AML2 protein and is also reactive with human RUNX3/AML2; however, this antibody is not suggested for immunohistochemical analysis of human tissues. This antibody does not recognize RUNX1 and RUNX2 proteins.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus 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

W: Western Blotting **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin) **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

Cross-Reactivity Key

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

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