Revision 4

Store at -20C

#8758

FoxC1 (D8A6) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP	H M R	Endogenous	75	Rabbit IgG	#Q12948	2296

Product Usage Information

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:200

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

FoxC1 (D8A6) Rabbit mAb recognizes endogenous levels of total FoxC1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Tyr64 of human FoxC1 protein.

Background

Forkhead box (Fox) proteins are a family of evolutionarily conserved transcription factors defined by the presence of a winged helix DNA-binding domain called a Forkhead box (1). In humans, there are over 40 known Fox protein family members, divided into 19 subfamilies, which have evolved to regulate gene transcription in diverse and highly specialized biological contexts throughout development (2). Mutations that disrupt the expression of Fox gene family members have consequently been implicated in a broad array of human disorders, including immunological dysfunction, infertility, speech/language disorders, and cancer (3,4).

FoxC1 (FKHL7, FREAC3) is one of two mammalian FoxC subfamily members. Along with FoxC2, it is expressed in paraxial mesoderm where it functions to promote somitogenesis, myogenesis, and vascular development, possibly under Wnt/β-catenin regulation (5). Mutations in FoxC1 are implicated in anterior segment dysgenesis (ASD) disorders, including congenital glaucoma and Axenfeld-Rieger syndrome (6). Research studies have shown that alterations in FoxC1 expression are linked to breast cancer invasiveness (7,8) and have been shown to modulate proliferation and migration of breast cancer cells *in vitro* (9).

Background References

1. Myatt, S.S. and Lam, E.W. (2007) *Nat Rev Cancer* 7, 847-59.
2. Jackson, B.C. et al. (2010) *Hum Genomics* 4, 345-52.
3. Hannenhalli, S. and Kaestner, K.H. (2009) *Nat Rev Genet* 10, 233-40.
4. Benayoun, B.A. et al. (2011) *Trends Genet* 10, 224-32.
5. Savage, J. et al. (2010) *Differentiation* 79, 31-40.
6. Weisschuh, N. et al. (2008) *Clin Genet* 74, 476-80.
7. Dejeux, E. et al. (2010) *Mol Cancer* 9, 68.
8. Muggerud, A.A. et al. (2010) *Breast Cancer Res* 12, R3.
9. Ray, P.S. et al. (2010) *Cancer Res* 70, 3870-6.

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

Cross-Reactivity Key

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

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