

FoxC2 (D4D4) Rabbit mAb

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	60	Rabbit IgG	#Q99958	2303

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, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

FoxC2 (D4D4) Rabbit mAb recognizes endogenous levels of total FoxC2 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Leu278 of human FoxC2 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).

The expression of FoxC2 and several other Fox transcription factors are regulated during adipogenesis, suggesting their involvement in adipocyte differentiation (5). A transgenic mouse model exhibiting over expression of FoxC2 in white adipose tissue (WAT) and brown adipose tissue (BAT) showed a reduction of the intra-abdominal WAT depot (6). The BAT-specific gene *Ucp1* is upregulated in the intra-abdominal WAT depot of these transgenic mice, resulting in histological features similar to those seen in BAT. This evidence suggests that FoxC2 can play a protective role against obesity and diet-induced insulin resistance (6).

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. Gerin, I. et al. (2009) *J Biol Chem* 284, 10755-63.
6. Cederberg, A. et al. (2001) *Cell* 106, 563-73.

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

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