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FOXC1 Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP8907b

Specification

FOXC1 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession Q12948

FOXC1 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 2296

Other Names
Forkhead box protein C1, Forkhead-related protein FKHL7, Forkhead-related transcription factor 3, FREAC-3, FOXC1, FKHL7, FREAC3

Target/Specificity
The synthetic peptide sequence used to generate the antibody AP8907b was selected from the C-term region of human FOXC1. A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

FOXC1 Antibody (C-term) Blocking Peptide - Protein Information

Name FOXC1

Synonyms FKHL7, FREAC3

Function
DNA-binding transcriptional factor that plays a role in a broad range of cellular and developmental processes such as eye, bones, cardiovascular, kidney and skin development (PubMed:11782474, PubMed:14506133, PubMed:14578375, PubMed:15277473, PubMed:15299087, PubMed:15684392, PubMed:16449236, PubMed:<a

href="http://www.uniprot.org/citations/16492674" target="_blank">16492674, PubMed:17210863, PubMed:19279310, PubMed:19793056, PubMed:25786029, PubMed:27804176, PubMed:27907090). Acts either as a transcriptional activator or repressor (PubMed:11782474). Binds to the consensus binding site 5'- [G/C][A/T]AAA[T/C]AA[A/C]-3' in promoter of target genes (PubMed:11782474, PubMed:12533514, PubMed:14506133, PubMed:19793056, PubMed:27804176, PubMed:7957066). Upon DNA-binding, promotes DNA bending (PubMed:14506133, PubMed:7957066). Acts as a transcriptional coactivator (PubMed:26565916). Stimulates Indian hedgehog (Ihh)-induced target gene expression mediated by the transcription factor GLI2, and hence regulates endochondral ossification (By similarity). Also acts as a transcriptional coregulator by increasing DNA-binding capacity of GLI2 in breast cancer cells (PubMed:26565916). Regulates FOXO1 through binding to a conserved element, 5'-GTAAACAAA-3' in its promoter region, implicating FOXC1 as an important regulator of cell viability and resistance to oxidative stress in the eye (PubMed:17993506). Cooperates with transcription factor FOXC2 in regulating expression of genes that maintain podocyte integrity (By similarity). Promotes cell growth inhibition by stopping the cell cycle in the G1 phase through TGFB1- mediated signals (PubMed:12408963). Involved in epithelial-mesenchymal transition (EMT) induction by increasing cell proliferation, migration and invasion (PubMed:20406990, PubMed:22991501). Involved in chemokine CXCL12-induced endothelial cell migration through the control of CXCR4 expression (By similarity). Plays a role in the gene regulatory network essential for epidermal keratinocyte terminal differentiation (PubMed:27907090). Essential developmental transcriptional factor required for mesoderm-derived tissues, such as the somites, skin, bone and cartilage. Positively regulates CXCL12 and stem cell factor expression in bone marrow mesenchymal progenitor cells, and hence plays a role in the development and maintenance of mesenchymal niches for haematopoietic stem and progenitor cells (HSPC). Plays a role in corneal transparency by preventing both blood vessel and lymphatic vessel growth during embryonic development in a VEGF-dependent manner. Involved in chemokine CXCL12-induced endothelial cell migration through the control of CXCR4 expression (By similarity). May function as a tumor suppressor (PubMed:12408963).

Cellular Location

Nucleus Note=Colocalizes with PITX2 isoform 3 in the nucleus at subnuclear chromatine regions (PubMed:16449236). Colocalizes with CBX5 to a heterochromatin-rich region of the nucleus (PubMed:15684392) Colocalizes with GLI2 in the nucleus (By similarity) {ECO:0000250|UniProtKB:Q61572, ECO:0000269|PubMed:15684392, ECO:0000269|PubMed:16449236}

Tissue Location

Expressed in keratinocytes of epidermis and hair follicle (PubMed:27907090). Expressed strongly in microvascular invasion (MVI) formation, basal-like breast cancer (BLBC) and hepatocellular tumors (PubMed:20406990, PubMed:22991501). Expressed in breast cancers (at protein level) (PubMed:26565916). Expressed in hematopoietic cells (PubMed:8499623).

FOXC1 Antibody (C-term) Blocking Peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

FOXC1 Antibody (C-term) Blocking Peptide - Images

FOXC1 Antibody (C-term) Blocking Peptide - Background

Binding of FREAC-3 and FREAC-4 to their cognate sites results in bending of the DNA at an angle of 80-90 degrees.

FOXC1 Antibody (C-term) Blocking Peptide - References

Mears,A.J., et.al., Am. J. Hum. Genet. 59 (6), 1321-1327 (1996)Gould,D.B., et.al., Am. J. Hum. Genet. 61 (3), 765-768 (1997)