

Product datasheet for **MC221486**

Six4 (NM_011382) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Six4 (NM_011382) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Six4
Synonyms:	AI047561; AREC3; TrexBF
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >MC221486 representing NM_011382
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGTCCTCTTCTCCCCACCGGCAGATTGCAAGTGCGGCGGACATCAAGCAGGAGAATGGGATGGAAA
 GCGCCTCGGAAGGACAGGAGGCGCACCGAGAAGTGGCGGGGGCGCGCGGCTGGGCTGAGCCCCCGGC
 TCCAGCTCCTTTCCCTGGAGCCGGGGACGCCGCGGCTGCCTCCAGGGTAAGCCGGGAGGAAGGGGCA
 GCGGCGCGGGAGCGGCAGATCAGGTACAACCTCCACTCGAACTTCTGGGCAGGCACCAGCACGCAGCCG
 CCGCGCAGCCCCACTGGCCTTCTCGCCGACCATGTCGCCTGCGTGTGCGAGGCGTTGCAGCAGGGGG
 CAACCTGGACCGCTGGCCGGTTTCTTTGGTCCCTGCCAGAGCGATCTGCTACGTGGCAACGAGAGC
 CTTCTGAAGGCGGAGCGCTCGTGGCTTCCACCAGGGCATCTACCCTGAGTTGTACAGCATCTCGAGA
 GCCACAGCTTCGAGTCGGCCAACCATCCGCTGCTGCAGCAGCTCTGGTACAAGGCGCGCTACACCGAGGC
 CGAGCGAGCGCGCGGCCGCTGGGCGCGTGGACAAGTACCGGCTGCGCAGGAAATCCCTTGCCC
 CGCACCATCTGGGACGGCGAGGAGACGGTGTATTGTTTCAAGGAGAAGTCCGCGAACCGCTCAAGGAGC
 TCTACAAGCAGAATCGCTACCCCTCGCCGGCTGAGAAGCGGCACCTGGCCAAGATCACCGCCCTCTCCCT
 CACCCAGGTCAGCAACTGGTTCAAGAACCAGCGGCGAGCGTGACCGAAACCCCTCCGAGACCCAGTCCAAA
 AGCGAATCGGATGGCAACCCAGTACCGAGGATGAATCCAGCAAGGGACATGAGGATTTGTCTCCTCATC
 CACTTTCAGGCGCATCTGATGGCGTCACCAACCTCAGCCTCTCTAGCCACGTGGAGCCAGTATATATGCA
 ACAAAATGGAAATGCTAAGATATCACTAAGCTCGTCTGGAGTTTGTGTAATGGAAGCTTAGTACCTGCA
 AGTACTTACCTGTCTTCTTAATGGCAATCTTTTATTACAGGACACAATGGAGTTATCCTTAATGGAC
 TGAATGTGGGAAATACACAGACAGTGTCACTGAACCCACCAAAATGTCTTCAAACATTGTGGCAATGG
 CATAGCCATGACAGACATCCTGGGATCTACCTCCAGGATGTGAAAGAATTCAAAGTCCTCCAGAGTTCT
 GCTGTGAACTCAGCAGCCACCACCTCTACAGCCCTAGTGCCCTGTGTCATTCCAGGGCTGATACCCCT
 GCACTGAAGTGAAGAGAAAGGCATTACAGACAGTGGCCTCCAGGACGGTGGCTCTGTGGTGACTTTTAC
 TACACCCGTGCAAATTAACCAAGTATGGCATTGTCCAGATCCCTAATTCTGGAGCCAACGGCCAGTTCCTT
 AATGGGAGCATTGGATTCTCCTACTGCAGTGCCTCCTGTCTCAGTAGCAGCTTACAAGGTAATCTTT
 CAGTTACCCCAAGCACTTCGGACGGAAGCACATTTACAAGTGAGCCAGCCACAGTCCAGCACGGTAAACT
 TTTCTGAGCCCTTACCCCAAGTGCAGTGGTATACACCGTTCCCTAATTCAGGCCAGAGTGTAGGAGCT
 GTGAAACAGGAAGGCTTAGAAAGAGGCCTGGTCTTTTCTCAGTTGATGCCTGTCAATCACAGTGCACAAG
 TAAATGCAAGCCTGTCTTCGAAAAATCTCTCTGGGAGTGGCTCCATCCTCTGACCTCGTCGTTGGTTAA
 TGTGTCCGCCGCCACGGTTTTTCCCTGACCCCCCTACACTACTTAATCCCACTGAGCTCAACCCTGAC
 CTTGCCGAGAGCCAGCCCGTGTCTGCACCTGTGGCAAGCAAATGTACTGTGTCTGTCTGACGAACACTA
 ACTATGCAACCCCTCAGAAGTGTCCCTTATTCGGGGCAAGACCTATTGTCCGGCCCGATGACCCAGGC
 TGCCCTGGGTGAGATCGTACCCACAGCTGAAGAGCAGGTGAGCCACGCCTCAACAGCAGTCCACCAGGAT
 TTTGTGAGAGAACAGCGCTTGGTTCTGCAGTCAGTCCCTAACATAAAAAGAGAATTTCTTACAAAATCTG
 AGAACAAAAGCAACAAACAACTTAATGATGTTAGACTCGAAATCCAAGTACGTCTGGACGGCATGGTTGA
 AGCCGGCTGTGAAGACCTGGGAACGGACAAAAAAGAGCTGGCCAAGCTCCAAACCGTCCAGTTGGATGAA
 GACATGCAAGACTTAA

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: Sgfl-Mlul
ACCN: NM_011382
Insert Size: 2328 bp

OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
Components:	The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).
Reconstitution Method:	<ol style="list-style-type: none">1. Centrifuge at 5,000xg for 5min.2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.3. Close the tube and incubate for 10 minutes at room temperature.4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.
RefSeq:	NM_011382.2 , NP_035512.1
RefSeq Size:	5572 bp
RefSeq ORF:	2328 bp
Locus ID:	20474
UniProt ID:	Q61321
Cytogenetics:	12 C3

Gene Summary:

Transcriptional regulator which can act as both a transcriptional repressor and activator by binding a DNA sequence on these target genes and is involved in processes like cell differentiation, cell migration and cell survival. Transactivates gene expression by binding a 5'-[CAT]A[CT][CT][CTG]GA[GAT]-3' motif present in the Trex site and from a 5'-TCA[AG][AG]TTNC-3' motif present in the MEF3 site of the muscle-specific genes enhancer (PubMed:14966291). Acts cooperatively with EYA proteins to transactivate their target genes through interaction and nuclear translocation of EYA protein (PubMed:10490620). Acts synergistically with SIX1 to regulate target genes involved in formation of various organs, including muscle, kidney, gonad, ganglia, olfactory epithelium and cranial skeleton. Plays a role in several important steps of muscle development. Controls the genesis of hypaxial myogenic progenitors in the dermomyotome by transactivating PAX3 and the delamination and migration of the hypaxial precursors from the ventral lip to the limb buds through the transactivation of PAX3, MET and LBX1 (PubMed:15788460). Controls myoblast determination by transactivating MYF5, MYOD1 and MYF6 (PubMed:15788460, PubMed:17592144). Controls somitic differentiation in myocyte through MYOG transactivation (PubMed:15788460). Plays a role in synaptogenesis and sarcomere organization by participating in myofiber specialization during embryogenesis by activating fast muscle program in the primary myotome resulting in an up-regulation of fast muscle genes, including ATP2A1, MYL1 and TNNT3 (PubMed:19962975, PubMed:21884692). Simultaneously, is also able to activate inhibitors of slow muscle genes, such as SOX6, HRASLS, and HDAC4, thereby restricting the activation of the slow muscle genes (PubMed:21884692). During muscle regeneration, negatively regulates differentiation of muscle satellite cells through down-regulation of MYOG expression (PubMed:20696153). During kidney development regulates the early stages of metanephros development and ureteric bud formation through regulation of GDNF, SALL1, PAX8 and PAX2 expression (PubMed:17300925). Plays a role in gonad development by regulating both testis determination and size determination. In gonadal sex determination, transactivates ZFPM2 by binding a MEF3 consensus sequence, resulting in SRY up-regulation. In gonadal size determination, transactivates NR5A1 by binding a MEF3 consensus sequence resulting in gonadal precursor cell formation regulation (PubMed:23987514). During olfactory development mediates the specification and patterning of olfactory placode through fibroblast growth factor and BMP4 signaling pathways and also regulates epithelial cell proliferation during placode formation (PubMed:19027001). Promotes survival of sensory neurons during early trigeminal gangliogenesis (PubMed:16938278). In the developing dorsal root ganglia, up-regulates SLC12A2 transcription (PubMed:15955062). Regulates early thymus/parathyroid organogenesis through regulation of GCM2 and FOXN1 expression (PubMed:16530750). Forms gustatory papillae during development of the tongue (PubMed:21978088). Also plays a role during embryonic cranial skeleton morphogenesis (PubMed:20515681).[UniProtKB/Swiss-Prot Function]