

## Product datasheet for **SC123210**

### **MATH5 (ATOH7) (NM\_145178) Human Untagged Clone**

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** MATH5 (ATOH7) (NM\_145178) Human Untagged Clone  
**Tag:** Tag Free  
**Symbol:** MATH5  
**Synonyms:** bHLHa13; Math5; NCRNA; PHPVAR; RNANC  
**Mammalian Cell Selection:** None  
**Vector:** [pCMV6-XL5](#)  
**E. coli Selection:** Ampicillin (100 ug/mL)

**Fully Sequenced ORF:** >OriGene sequence for NM\_145178 edited  
 CCACGCGTCCGCCACGCGTCCGCTACTGCGCTAAAAGCGCTCCTTCCCTGAGCTTCGGG  
 AAAGAGTTCATCTTCTGCAAAGGAGTCTCAGGCTTTCCAGAGGACTTGAAAGGCCTTC  
 CTCGAACCCGCCACCAAACCTCTGCTGCAGAAGGTTTCTTCTTTTTCAACTTCATG  
 TTGAGAAAATGACTTTCTTGTGAGCATCTCATTTTCCCCTAAATTTGGGCAAGTGAAGAG  
 ATATCAGCCTGGTCATCCAGTAGAACAGAAGGCCGAGTCCCGCACTCCCCACTGTAAC  
 TATTTGATTGCACGTGAGTTGCTTTGTTATGACTTATTTGCTCAGAAGAGGCACGTTGG  
 GAAGCGGCTCGAGAGACCAGCCACGCGCAGGTCTGAGCGGGCGGGCGTGCAGGTCGG  
 CGCCTCGTGCTTGGGGCCGGGATGAAGTCTGCAAGCCAGCGGCCCGCGGGGGAG  
 CGCGGTTGCACCCCGTGCAGCGGGCGGCACCGAGTGCAGCGGCACGTGCAGCGGGGCCG  
 GGCGGCTGGAGAGCGCGCGCGCAGGCGCTGGCGGCAACGCGCGGAGCGCCCGCA  
 TGCAGGGGCTCAACACTGCCTTCGACCGCTTACGCAAGGTGGTTCCCACTGGGGCCAGG  
 ATAAAAAGCTGTCCAAGTACGAGACCCTGCAGATGGCCCTGAGCTACATCATGGCTCTGA  
 CCCGGATCCTGGCCGAGGCCGAGCGATTGCGCTCGGAGCGGGACTGGGTGGGTCTCCACT  
 GTGAGCACTTCGGCCGCGACCACTACCTCCCGTTCGCGGGCGCAAGCTGCCGGGCGAGA  
 GCGAGCTGTACAGCCAGAGACTTTCGGCTTCCAGCCGAGCCCTCCAGATGGCCACCT  
 AGGGCGCGCGCTCCGCGGGGGTGGGTGTCCGGCAGCCGCTCCGAGCCTCGGCCCTGCC  
 CAAGTAGCCAGAAAGCCTCCGCGGGGCCAGGATTCTAAGGATGCAATCCTCGAGGAAAAT  
 TAGTCGATTCTCAGATTACCTTTATTTCGATCATCAGACCTATGGACGCAATCATTAAAT  
 TGCTTTCTTTTCCCCTCCTTTGTATTTGTAGATTTCAATTAATGGATCTTGTGAAT  
 GGGTTGATTGCTGTGAAAATAATGCCCCCTTTCCCCTTTTCTGGGCTACTTTGAGGGAAA  
 ACAATTTTAAGAAAAATAGGATTAAGCTATTCTGTTCCAGTCTCAGAGAAAATAACTACT  
 TTCTTAACTTTGTGAGTTTGTCTGTTCCGGTGAAGTTACAGTATCCATTACTTGTGTT  
 TGCTCACAAACAGAGCTACCTTCTGTTGTGTAATGCGTTTTTGTCTTTAGTGCATTGTGT  
 GTGCAAGCATGAAGTAGAAACACTTTTTTTTTCTGGGTACAGTACATGGGTATCGGTGCT  
 CTGATTTTTTTAACTGTGTACACATTATTAATAATACATTTTATAAAATATAAAAAA  
 AAAAAAAA



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<b>5' Read Nucleotide Sequence:</b>	<p>&gt;OriGene 5' read for NM_145178 unedited</p> <pre>TCACATTTGTATACGACTCCTATAGGCGGCCGCGACTTCCCGGGATATCGTCGACCCACG CGTCCGCCACGCGTCCGCTACTGCGCTAAAAGCGCTCCTTCCCTGAGCTTCGGGAAAGA GTTTCATCTTCTGCAAAGGAGTCTCAGGCTTCCAGAGGACTTGAAAGGCCTTCTCGA ACCCGCCACACAACTCTGCTGCAGAAAGTTTCTTCTTTTTCAACTTCATGTTGAG AAAATGACTTTCTTTGAGCATCTATTTTCCCCTAAATTTGGGCAAGTGAAGAGATATC AGCCTGGTCATCCAGTAGAACAGAAGGCCGAGTCCCGCACTCCCCCACTGTAACATATT GATTGCACGTGAGTTGCTTTGTTTATGACTTATTTGCTCAGAAGAGGCAGTTGGGAAGC GGCTCGAGAGACCAGCCACGCGCATGTCTGAGCGGGCGGGCGTGCAGGTCGGCGCCT CGCTGCTTGGGGCCGGGATGAAGTCTGCAAGCCAGCGGCCCGCCGGCGGGAGCGCGC GTTGCACCCCGTGCAGCGGGTGCACCGAGTGCAGCGGCACGTGCAGCGGGCGGGCGG CTGGAGAGCGGGCGCATGCGCTGGCGGCCAACGCGCGGAGCGCCCGCATGCAG GGGCTCAACTGCCTTCGACCGCTTACGCAGGGTGGTCCCCAGTGGGGCCAGGATAAA AAGCTGTCCAAGTACGAAGACCCTGCAGAAGGCCCTGAGCTACATCATGGGCTCTGAAC CCGGATCTGGCCCAAGGCCGAGCGATTGGCCTCGGACCGGGACTGGGGTGGGTCTCCA CTGTGAGCACTTCGGCCGGGACCACTACCTCCCGTTCCGGGCCCAAACCTCCCGGCCAG AACCAACTTTACACACGAACTTTTCGGGTTTCAGACCGGAGCCTTT</pre>
<b>Restriction Sites:</b>	Please inquire
<b>ACCN:</b>	NM_145178
<b>Insert Size:</b>	1509 bp
<b>OTI Disclaimer:</b>	<p>Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> or by calling 301.340.3188 option 3 for pricing and delivery.</p> <p>The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. <a href="#">More info</a></p>
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<a href="#">NM_145178.2</a> , <a href="#">NP_660161.1</a>
<b>RefSeq Size:</b>	1487 bp

RefSeq ORF: 459 bp

Locus ID: 220202

UniProt ID: [Q8N100](#)

Cytogenetics: 10q21.3-q22.1

Protein Families: Transcription Factors

**Gene Summary:** This intronless gene encodes a member of the basic helix-loop-helix family of transcription factors, with similarity to Drosophila atonal gene that controls photoreceptor development. Studies in mice suggest that this gene plays a central role in retinal ganglion cell and optic nerve formation. Mutations in this gene are associated with nonsyndromic congenital retinal nonattachment. [provided by RefSeq, Dec 2011]