

## Product datasheet for **RC210945**

### **GATA4 (NM\_002052) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	GATA4 (NM_002052) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GATA4
Synonyms:	ASD2; TACHD; TOF; VSD1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide Sequence:**

>RC210945 ORF sequence  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGTATCAGAGCTTGGCCATGGCCGCCAACACCGGGCCGCCCGGTCCTACGAGCGGGCGGCCCG  
 GCGCCTTCATGCACGGCGCGGGCGCCGCTCTCGCCAGTCTACGTGCCACACCGGGGTGCCCTCCTC  
 CGTGCTGGGCTGTCTACCTCCAGGGCGAGGCGGGCTCTGCGTCCGGAGGCGCTCGGGCGGCAGC  
 TCCGGTGGGGCCGCTGTGTCGGGGCCGGGACCCAGCAGGGCAGCCGGGATGGAGCCAGGCGGGAG  
 CCGACGGAGCCGTTACACCCCGCCCGGTGTGCGCCGCTTCTCCTCCCGGGGACCACCGGGTCCCT  
 GCGGGCCCGCCCGCTGCCGCGCCCGGAAGCTGCGGCCTACAGCAGTGGCGGGGAGCGGGGT  
 GCGGGCTGGCGGGCCGAGCAGTACGGGCGCGGGCTTCGCGGGCTCTACTCCAGCCCTACCCGG  
 CTTACATGGCCGACGTGGGCGCTCTGGGCGCAGCCGCGCCCTCCGCGGCCCTTCGACAGCC  
 GGTCTGCACAGCTGCCCGCCGGCCAAACCCGCGCCGACACCCCAATCTCGATATGTTTGACGAC  
 TTCTCAGAAGGCAGAGAGTGTGTCAACTGTGGGCTATGTCCACCCCGCTCTGGAGGCGAGATGGGACGG  
 GTCATATCTGTGCAACGCTGCGGCCTTACCACAAGATGAACGGCATCAACCGCCGCTCATCAAGCC  
 TCAGCGCCGGCTGTCCGCTCCCGCCGAGTGGGCTCTCCTGTGCCAACTGCCAGACCACCACCACG  
 CTGTGGCGCCGAATGCGGAGGGCGAGCCTGTGTGCAATGCCTGCGGCCTTACATGAAGCTCCACGGGG  
 TCCCCAGGCTCTTGCAATGCGGAAAGAGGGGATCCAAACCAGAAAACGGAAGCCCAAGAACCTGAATAA  
 ATCTAAGACACCAGCAGCTCCTCAGGCAGTGAGGCCTCCTCCCGCCAGCGGTGCTCCAGCAACTCC  
 AGCAACGCCACCACCAGCAGCAGCGAGGAGATGCGTCCCATCAAGACGGAGCCTGGCCTGTCATCTCA  
 ACGGGCACAGCAGCTCCGTGTCCAGACGTTCTCAGTCAGTGCATGTCTGGCCATGGGCCCTCCATCCA  
 CCCTGTCCTCTCGGCCCTGAAGCTCTCCCAAGGCTATGCGTCTCCCGTCAGCCAGTCTCCACAGACC  
 AGCTCAAGCAGGACTCTTGAACAGCCTGGTCTTGGCCGACAGTCACGGGGACATAATCACTGCG

**ACGCGT**ACGCGGGCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC210945 protein sequence  
 Red=Cloning site Green=Tags(s)

MYQSLAMAANHGPPPGAYEAGGPGAFMHGAGAASSPVYVPTPRVPSSVLGLSYLQGGGAGSASGGASGGS  
 SGGAAAGAGPGTQQGSPGWSQAGADGAAATPPPVSPRFSFPGTTGSLAAAAAAAAAREAAAYSSGGGAAG  
 AGLAGREYGRAGFAGSYSSPYPAYMADV GASWAAAAAASAGPFDSPVLHSLPGRANPAARHPNLDMFDD  
 FSEGRECVNCGAMSTPLWRRDGTGHYLCNACGLYHKMNGINRPLIKPQRRLSASRRVGLSCANCQTTTTT  
 LWRRNAEGEPVCNACGLYMKLHGVPRLAMRKEGIQTRKRKPKNLNLSKTPAAPSGSELPASGASSNS  
 SNATTSSEEMRPIKTEPGLSSHGHSSVSQTFSVSAMS GHGSPSIHPVLSALKLSPQGYASPVSPSPQT  
 SSKQDSWNSLVLADSHGDIITA

**TR**TRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk6269\\_h09.zip](https://cdn.origene.com/chromatograms/mk6269_h09.zip)

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_002052

**ORF Size:** 1326 bp

**OTI Disclaimer:** 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. [More info](#)

**OTI Annotation:** This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

**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:**
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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_002052.5](#)

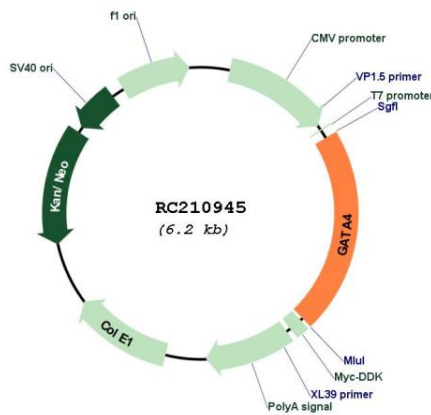
**RefSeq Size:** 3419 bp

**RefSeq ORF:** 1329 bp

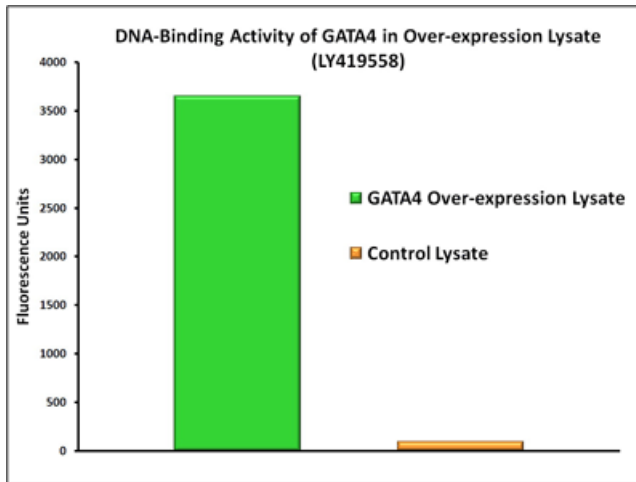
**Locus ID:** 2626

<b>UniProt ID:</b>	<u>P43694</u>
<b>Cytogenetics:</b>	8p23.1
<b>Protein Families:</b>	Embryonic stem cells, ES Cell Differentiation/IPS, Induced pluripotent stem cells, Transcription Factors
<b>MW:</b>	44.6 kDa
<b>Gene Summary:</b>	This gene encodes a member of the GATA family of zinc-finger transcription factors. Members of this family recognize the GATA motif which is present in the promoters of many genes. This protein is thought to regulate genes involved in embryogenesis and in myocardial differentiation and function, and is necessary for normal testicular development. Mutations in this gene have been associated with cardiac septal defects. Additionally, alterations in gene expression have been associated with several cancer types. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Apr 2015]

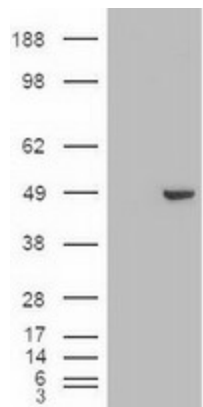
**Product images:**



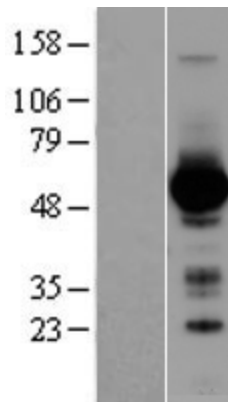
Circular map for RC210945



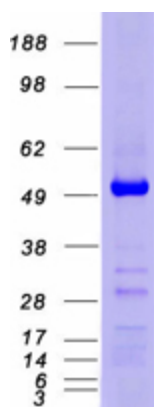
DNA-binding activity of GATA4 was measured in OriGene over-expression lysate [LY419558] and a control lysate. Three microliters of each lysate was tested with a transcription factor binding assay utilizing GATA4-specific DNA sequences. The high level of activity observed in the over-expression lysate compared to the control lysate demonstrates that the expressed GATA4 is biologically active in the lysate. Overexpression cell lysates are prepared from HEK293T cells transfected with RC210945 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY GATA4 (Cat# RC210945, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-GATA4 (Cat# [TA500091]). Positive lysates [LY419558] (100ug) and [LC419558] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY419558]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC210945 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified GATA4 protein (Cat# [TP310945]). The protein was produced from HEK293T cells transfected with GATA4 cDNA clone (Cat# RC210945) using MegaTran 2.0 (Cat# [TT210002]).