

Product datasheet for **RG230823**

CTCF (NM_001191022) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CTCF (NM_001191022) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CTCF
Synonyms:	CFAP108; FAP108; MRD21
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide
Sequence:**

>RG230823 representing NM_001191022
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGAAGGTGATGCAGTCGAAGCCATTGTGGAGGAGTCCGAAACTTTTATTAAAGGAAAGGAGAGAAAGA
 CTTACCAGAGACGCCGGGAAGGGGGCCAGGAAGAAGATGCCTGCCACTTACCCCAGAACCAGACGGATGG
 GGTGAGGTGGTCCAGGATGTCAACAGCAGTGTACAGATGGTGTGATGGAACAGCTGGACCCACCCCTT
 CTTCAGATGAAGACTGAAGTAATGGAGGGCACAGTGGCTCCAGAAGCAGAGGCTGCTGTGGACGATACCC
 AGATTATAACTTTACAGTTGTAATAATGGAGGAACAGCCATAAACATAGGAGAACTTCAGCTTGTTC
 AGTACCTGTTCTGTGACTGTACCTGTTGCTACCACTTCAGTAGAAGAAGTTCAGGGGGCTTATGAAAAT
 GAAGTGTCTAAAGAGGGCCTTGCAGAAAGTGAACCCATGATATGCCACACCCTACCTTTGCCTGAAGGGT
 TTCAGGTGGTTAAAGTGGGGCCAATGGAGAGGTGGAGACACTAGAACAAGGGGAACTTCCACCCAGGA
 AGATCCTAGTTGGCAAAAAGACCAGACTATCAGCCACCAGCCAAAAAACAAGAAAACAAAAAGAGC
 AAAGTGCCTTATACAGAGGAGGGCAAAGATGTAGATGTGTCTGTCTACGATTTTGGAGGAAGAACAGCAGG
 AGGGTCTGCTATCAGAGGTTAATGCAGAGAAAGTGGTTGGTAATATGAAGCCTCCAAAGCCAACAAAAAT
 TAAAAAGAAAGGTGTAAGAAGACATTCAGTGTGAGCTTTGAGTTACACGTGTCCACGGCGTTCAAAT
 TTGGATCGTCACATGAAAAGCCACACTGATGAGAGACCACACAAGTGCCATCTCTGTGGCAGGGCATTCA
 GAACAGTCACCCCTCTGAGGAATCACCTAACACACACACAGGTACTCGTCTCACAAAGTGGCCAGACTG
 CGCATGGCCTTTGTGACCAGTGGAGAATTGGTTCGGCATCGTCGTTACAAACACACCCACGAGAAGCCA
 TTCAAGTGTCCATGTGCGATTACGCCAGTGTAGAAGTCAGCAAAATTAACGTCACATTCGCTCTCATA
 CTGGAGAGCGTCCGTTTCAGTGCAGTTTGTGAGTTATGCCAGCAGGGACACATACAAGTGAAGGGCA
 CATGAGAACCCATTCAGGGGAAAAGCCTTATGAATGTTATATTTGTCATGCTCGGTTTACCCAAAGTGGT
 ACCATGAAGATGCACATTTTACAGAAGCACAGAAAATGTGGCCAAATTCACTGTCCCCACTGTGACA
 CAGTCATAGCCCAGAAAAGTGAATTTGGGTGCCACTTGCAGAAAGCAGCATTCTATATTGAGCAAGGCAA
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 AGCGCACCCACACCGGGGAGAAGCCTTACGCCTGCAGCCACTGCGATAAGACCTTCGCCAGAAGCAGCT
 TCTCGACATGCACTTCAAGCGCTATCACGACCCCAACTTCGTCCCTGCGGCTTTTGTCTGTTCTAAGTGT
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 AGATTCCTCTGACAGTGAATGCTGAACCAGATCTGGACGACAATGAGGATGAGGAGGAGCCTGCCGTA
 GAAATTGAACCTGAGCCAGAGCCTCAGCCTGTGACCCAGCCCCACCACCGCCAAGAAGCGGAGAGGAC
 GACCCCTGGCAGAACCAACCAGCCAAACAGAACCAAGCAACAGCTATCATTAGGTTGAAGACCAGAA
 TACAGGTGCAATTGAGAACATTATAGTTGAAGTAAAAAAGAGCCAGATGCTGAGCCCGCAGAGGGAGAG
 GAAGAGGAGGCCAGCCAGCTGCCACAGATGCCCAACGGAGACCTCACGCCGAGATGATCCTCAGCA
 TGATGGACCGG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence: >RG230823 representing NM_001191022
 Red=Cloning site Green=Tags(s)

MEGDAVEAIVEESETFIK GKERKTYQRRREGGQEEDACHLPQNQTDGGEVVQDVNSSVQVMMEQLDPTL
 LQMKTEVMEGTVAPEAAVDDTQIITLQVNMEEQPINIGELQLVQVPVPTVPVATTSVEELQGAYEN
 EVSKEGLAESEPMICHTLPLPEGFQVVKVGANGEVETLEQGELEPPQEDPSWQKDPDYQPPAKKTKKTKKS
 KLRYTEEGKDVDVSVYDFEEEEQQEGLLSEVNAAEKVVGNMPPKPTKIKKKGVKKTFCCELCSYTCPRRSN
 LDRHMKSHTERPHKCHLCGRAFRVTLLRNHLNTHGTTRPHKCPDCMAFVTSGELVRHRRYKHTHEKP
 FKCSMCDYASVEVSKLKRHIRSHTGERPFQCSLCSYASRDYKLRHMRTHSGEKPYECYICHARFTQSG
 TMKMHILQKHTENVAKFHCPHCDTVIARKSDLGVHLRQHSYIEQGGKCRYCDAVFHERYALIQHQKSHK
 NEKRFKCDQCDYACRQERHMIMHKRTHTEKPYACSHCDKTFRQKQLDMHFKRYHDPNFVPAAFVCSKC
 GKTFTRRNTMARHADNCAGPDGVEGENGGETKSKRGRKRMRKSKEDSSDSENAEPDLDDNEDEEPAV
 EIEPEPEPQVTPAPPPAKRRRPPGRNTNQPQNQPTAIIQVEDQNTGAIENIIVEVKKEPDAEPAEGE
 EEEAQAATDAPNGDLTPMILSMMDR

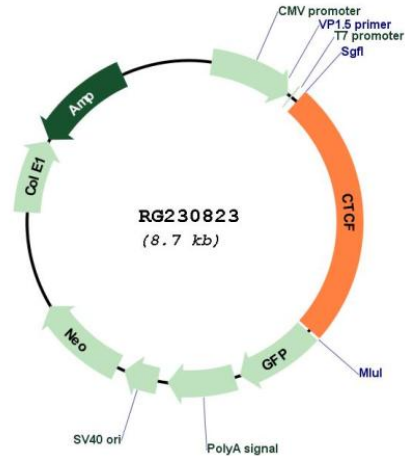
TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shutting:



Plasmid Map:


ACCN: NM_001191022

ORF Size: 2184 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.

RefSeq: [NM_001191022.1](#), [NP_001177951.1](#)

RefSeq Size: 2985 bp

RefSeq ORF: 1200 bp

Locus ID: 10664

UniProt ID: [P49711](#)

Cytogenetics: 16q22.1

Protein Families: Transcription Factors

Gene Summary: This gene is a member of the BORIS + CTCF gene family and encodes a transcriptional regulator protein with 11 highly conserved zinc finger (ZF) domains. This nuclear protein is able to use different combinations of the ZF domains to bind different DNA target sequences and proteins. Depending upon the context of the site, the protein can bind a histone acetyltransferase (HAT)-containing complex and function as a transcriptional activator or bind a histone deacetylase (HDAC)-containing complex and function as a transcriptional repressor. If the protein is bound to a transcriptional insulator element, it can block communication between enhancers and upstream promoters, thereby regulating imprinted expression. Mutations in this gene have been associated with invasive breast cancers, prostate cancers, and Wilms' tumors. Alternatively spliced transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2010]