MGC *premier* full length cDNA and ORF clones

TCH1003, TCM1004, TCR1005, TCB1006, TCL1007, TCT1008, TCZ1009, TOH6003, TOM6004, TOZ6009, TCHS1003, TCMS1004, TCRS1005, TCBS1006, TCLS1007, TCTS1008

MGC *premier* cDNA and ORF clones provide the highest sequence quality and confidence when purchasing pre-made full-length cDNA or ORF clones. Based on the Mammalian Gene Collection (MGC) developed by the National Institutes of Health (NIH) with rigorous sequence analysis resulting in less than 1 error in 50,000 bp, MGC *premier* cDNA and ORF clones are available for human, mouse, rat, bovine, Xenopus and zebrafish genomes. These collections are available as individual cDNA clones, ORF clones, rearrays of cDNA clones for gene families and pathways as well as genome libraries.

Note: During the generation of the MGC collection, some of these clones were generated with only the Open Reading Frame (ORF) and are Gateway© adapted. They can be identified in the search results by the name MGC *premier* ORF clone. (Gateway© is a registered trade mark of Life Technologies.)

MGC *premier* cDNA and ORF Clone Verification

For cDNA clones, ORF clones and other genomic resources, there is a small possibility of mistaken identification, incorrect DNA sequence, or incorrect annotation. Researchers are advised to perform end-sequencing of their purchased MGC clone and BLAST the results against the published GenBank sequence. This can also be accomplished through the Sequence Verification Service. See below for more details.

All MGC *premier* clones are 100% guaranteed to match their published sequence.

Sequence verification service

MGC *premier* cDNA clone identities can also be confirmed by end-sequencing prior to shipping. This risk-free option ensures the correct identity of the cDNA clone ordered.

transOMIC technologies will clonally isolate the cDNA clone/s ordered, end-sequence the requested clone/s and BLAST the output/s to eliminate any possible cross contamination that may be present from neighboring clones in the library. Successfully verified clones will be included in the shipment with their BLAST alignment. >95% identity over 100 bases of quality clipped sequence is considered a successful match to the desired clone.

Customers will be notified if a sequence fails and the item will be removed from their invoice. If an alternate clone for that gene is available it can be substituted for the incorrect clone.

To order this service use the Fetch my gene search to identify your cDNA clone of interest and select the item indicating it will be end sequenced before shipping.

MGC *premier* cDNA and ORF receipt and storage

Depending on the size of the order, clones may be received either in individual tubes or rearrayed into micro-titer plates. *E*. *coli* stocks containing these clones are provided in LB broth with 8% glycerol.

As the bacterial antibiotic selection marker varies from clone to clone in this collection; the tube will be color-coded for individual tubes (red = ampicillin/carbenicillin; black = chloramphenicol; green = kanamycin; brown = spectinomycin).

Clones in plates will be provided segregated as to the antibiotic requirement.

Individual tubes will be shipped at room temperature. They may be stored at 4°C for a few days, but should be stored at -80°C long-term. The rearrayed plates will be shipped frozen (on dry ice) and need to be placed directly at -80°C.

Making stock cultures from cDNA and ORF clones

Individual MGC clones

Grow the MGC clone culture in LB broth (LB-low salt - VWR EM1.00547.0500) with the appropriate antibiotic. Place 920 µl of culture into a polypropylene tube and add 80 µl sterile glycerol (8% glycerol). Mix well and store at –80˚C.
Alternatively, if not propagating for a plasmid DNA extraction, the culture can be grown in LB should be supplemented with 8% glycerol (VWR EM-4760).

The various vectors in the MGC collection use one of four bacterial antibiotic resistance genes for colony selection. Please refer to the IMAGE Consortium website https://web.archive.org/web/20090303224855/http://image.hudsonalpha.org/ for all vector specific information.

Recommended antibiotic concentrations are as follows:

- Ampicillin - 100 µg/ml
- Chloramphenicol - 25 µg/ml
- Kanamycin - 25 µg/ml
- Spectinomycin – 50 µg/ml

Plate Replication

Dispense ~160 µl of sterile Lennox Broth (LB-low salt - VWR EM1.00547.0500) into 96-well microtiter plates. The LB should be supplemented with 8% glycerol (VWR EM-4760) and the appropriate antibiotic.
Remove the foil seals (VWR 73520-056) from the source plates. Removing the seals while the source plates are frozen will minimize cross-contamination.
Place a sterile/disposable replicator (Genetix X5054) into the thawed plate and gently rotate replicator in the wells to mix the culture. Make sure to scrape the bottom of the plate. Place the replicator into the target plate and rotate again to transfer the cells.

Reseal the source plates and return to the –80°C freezer.

Place the inoculated target plates in a 37°C incubator and incubate for 12–24 hours.

Getting Clone Information

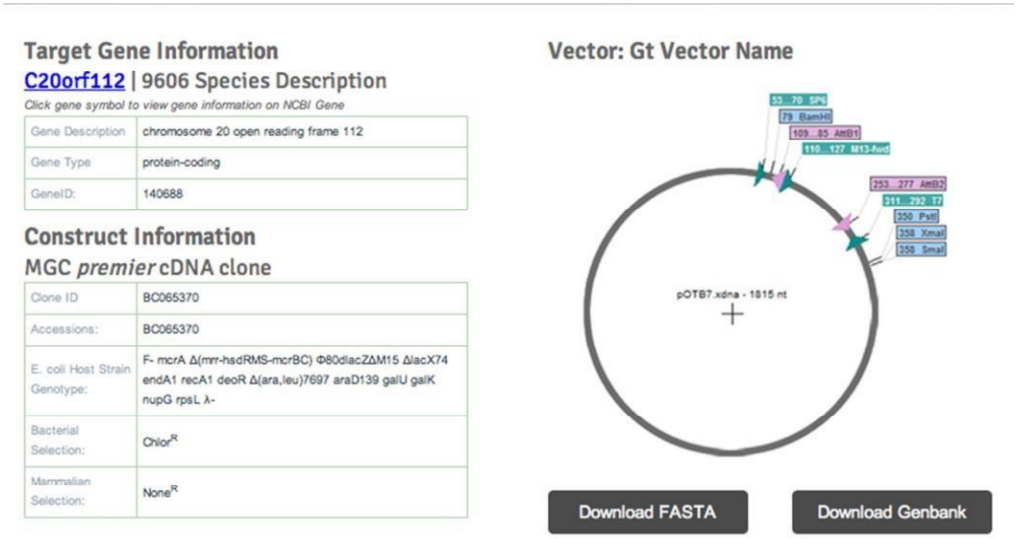
Relevant clone information for your MGC cDNA or ORF clone is available on the Fetch my Gene search results. Simply enter a clone ID number or accession number into the search box and click Go

Clicking the appropriate link on the search results page cDNA clones will display the clone details page (note: MGC ORFs, ORFS created within the MGC, will appear under the cDNA tab)

Clone Details Page

Clone information appropriate for each MGC *premier* vector can be obtained from the clone details page associated with your clone ID. Click on the clone ID from the gene search results page to access the clone details page and information on vector, sequencing primers, antibiotic selectable markers, *E. Coli* host strain and more including the published MGC cDNA/ORF insert sequence.

See below an example of the information you can obtain when clicking your specific gene's clone details.



Target Gene Information

C20orf112 | 9606 Species Description

Click gene symbol to view gene information on NCBI Gene

Gene Description	chromosome 20 open reading frame 112
Gene Type	protein-coding
GeneID:	140688

Construct Information

MGC *premier* cDNA clone

Clone ID	BC065370
Accessions:	BC065370
E. coli Host Strain Genotype:	F- mcrA Δ(mrr-hsdRMS-mcrBC) Φ80dlacZΔM15 ΔlacX74 endA1 recA1 deoR Δ(ara,leu)7697 araD139 galU galK nupG rpsL λ-
Bacterial Selection:	$Chlor^R$
Mammalian Selection:	$None^R$

Vector: Gt Vector Name

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cDNA Insert Sequence

>BC065370

CTTCTGTGAGCAGCGAGGATTTTGATATGAGCGACTCCACATGGATGTCAGCTGACCCGCACCTGGCCTC
CAGCCTGAGCCCCAGCCAGGACGAGAGGATGCGGAGCCCGCAGAACCTCCACAGTCAAGAGGACGATGAC
TCCTCCTCTGAGAGTGGCAGCGGCAATGGCTCCTCCACCCTGAACCCATCCACGTCGAGCAGCACGCAGG
GCGACCCTGCCTTCCCCGAGATGAATGGCAACGGCGCCGTGGCCCCCATGGACTTCACCACGGCCGCCGA
GGATCAGCCCATCAACCTGTGTGACAAGCTCCCGCCGGCCACGGCACTTGGCACAGCCTCCTACCCCTCG
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TTCTTCCTCTCCCCTTAGTAATTTATTTTTCTGAAAATGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA AAAAAA

Limited use license

The MGC *premier* cDNA and ORF clones are covered under a good faith agreement. Find updated information at www.transomic.com/Support/ProductLicenses