

Product datasheet for **RC223852**

BTN1A1 (NM_001732) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	BTN1A1 (NM_001732) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	BTN1A1
Synonyms:	BT; BTN; BTN1
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC223852 representing NM_001732
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCAGTTTTCCAAGCTCCGGTCTCCCAGATGTCTGCTCACCTCATTCTCCTCCAGCTGCCAAAC
 TGGATTACGCTCCCTTTGACGTATTGGACCCCGGAGCCATCCTGGCGTTGTGGGTGAGGACGCCGA
 GCTGCCCTGTGCGCTGTCCCGAACGCGAGCGCCGAGCACTTGGAGCTACGCTGGTTCGAAAGAAGGTT
 TCGCCGGCCGTGCTGGTGCATAGGGACGGGCGGAGCAGGAAGCCGAGCAGATGCCCGAGTACCGCGGC
 GGGCGACGCTGGTCCAGGACGGCATCGCCAAGGGGCGCGTGGCCTTGAGGATCCGTGGCGTCAGAGTCTC
 TGACGACGGGGAGTACACGTGCTTTTTCAGGGAGGATGGAAGCTACGAAGAAGCCCTGGTGCATCTGAAG
 GTGGCTGCTCTGGGCTCTGACCCTCACATCAGTATGCAAGTTCAGAGAATGGAGAAATCTGTCTGGAGT
 GCACCTCAGTGGGATGGTACCCAGAGCCCCAGGTGCAGTGGAGAACTTCCAAGGGAGAGAAGTTCCATC
 TACATCAGAGTCCAGGAATCCTGATGAAGAAGGTTTGTCTACTGTGGCTGCTTCAGTGCATCAGAGAC
 ACTTCTACGAAAAATGTGCTGCTACATCCAGAATCTCCTTCTGGACAGGAGAAGAAAGTAGAAATAT
 CCATACCAGCTTCTCCCTCCCAAGGCTGACTCCCTGGATAGTGGCTGTGGCTGTGCATCCTGATGTTCT
 AGGACTTCTACCATTTGGGTCCATATTTTTCACTTGGAGACTATACAACGAAAGCCAGAGAGAGGAGG
 AATGAATTCAGCTCTAAAGAGAGACTCCTGGAAGAACTCAAATGGAAAAAGGCTACCTTGCATGCAGTTG
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 GGAAGATTCACGTGAGAACTGCCTGAGAAAACAGAGAGATTTGACTCCTGGCCCTGTGTGTTGGGCCGT
 GAGACCTTCACCTCAGGAAGGCATTACTGGGAGGTGGAGTGGGAGACAGGACTGACTGGCAATCGGCCG
 TGTGTAGGGAGAATGTGATGAAGAAAGGATTTGACCCCATGACTCCTGAGAATGGGTTCTGGGCTGAGA
 GTTGTATGGAAAATGGGTACTGGGCCCTCACTCCTCTCCGACCCCTCTCCATTGGCAGGGCCCCACGC
 CGGTTTGGGATTTTCTAGACTATGAATCAGGAGACATCTCCTTCTACAACATGAATGATGGATCTGATA
 TCTATACTTTCTCCAATGTCACTTTCTCTGGCCCTCCGGCCCTCTTTTGCCTATGGTCTAGCGGTAA
 AAAGCCCCTGACCATCTGCCAATTGCTGATGGCCTGAGAGGTCACAGTATTGCTAATGCCAGGAC
 CTTTCTAAGGAGATCCCATTGTCCCCATGGGGGAGGAGTCTGCCCTAGGGATGCAGACACTCTCCATT
 CTAAGCTAATCCCTACCAACCCAGCCAAGGGGCACCT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC223852 representing NM_001732
 Red=Cloning site Green=Tags(s)

MAVFPSSGLPRCLLTLILLQLPKLDSAPFDVIGPPEPILAVVGEDAELPCRLSPNASAEHLELRWFRKKV
 SPAVLVHRDGREQEAEQMPYRGRATLVQDGIAGRVALRIRGVRVSDDEYTCFFREDGSYEEALVHLK
 VAALGSDPHISMVQENGEICLECTSVGWYEPQVQWRTSKGEKFPSTSESRNPDEEGLFTVAASVIIRD
 TSTKNVSCYIQNLLLQGEKKVEISIPASSLPRLTPWIVAVAVILMVLGLLTIIGSIFFTWRLYNERPRER
 NEFSSKERLLEELKWKATLHAVDVTLDPTAHPHLFLYEDSKSVRLEDSRQKLEKTERFDSWPCVLGR
 ETFTSGRHYWEVEVGDRTDWAIGVCRENVKMGFDPMTPENGFWAVELYGNGYWALPLRTPPLAGPPR
 RVGIFLDYESGDISFYNMNDGSDIYTFSNVTFSGPLRPFCLWSSGKKPLTICPIADGPERVTVIANAQD
 LSKEIPLSPMGEEASPRDADTLHSLKIPTQPSQGAP

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6117_d08.zip

Restriction Sites:

SgfI-MluI

Cloning Scheme:


ACCN: NM_001732

ORF Size: 1578 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_001732.1](#), [NP_001723.1](#)

RefSeq Size: 2901 bp

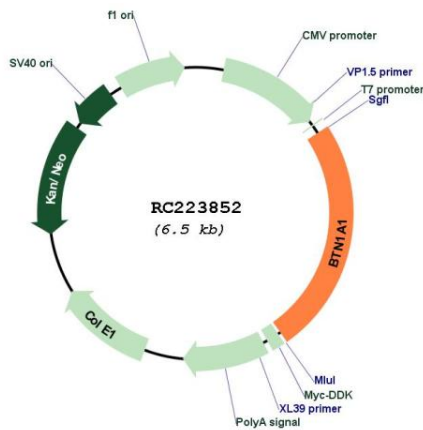
RefSeq ORF: 1581 bp

Locus ID: 696

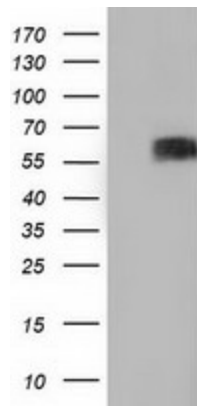
UniProt ID: [Q13410](#)
Cytogenetics: 6p22.2
Protein Families: Druggable Genome, Transmembrane
MW: 58.8 kDa

Gene Summary: Butyrophilin is the major protein associated with fat droplets in the milk. It is a member of the immunoglobulin superfamily. It may have a cell surface receptor function. The human butyrophilin gene is localized in the major histocompatibility complex (MHC) class I region of 6p and may have arisen relatively recently in evolution by the shuffling of exons between 2 ancestral gene families [provided by RefSeq, Jul 2008]

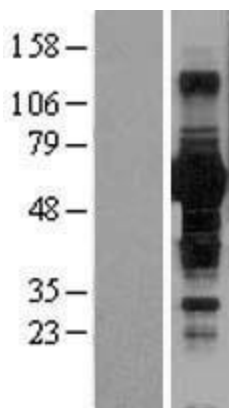
Product images:



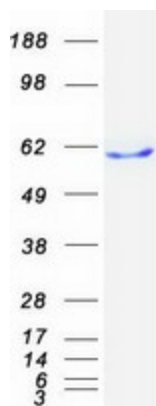
Circular map for RC223852



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY BTN1A1 (Cat# RC223852, 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-BTN1A1 (Cat# [TA501529]). Positive lysates [LY400653] (100ug) and [LC400653] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY400653]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC223852 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified BTN1A1 protein (Cat# [TP323852]). The protein was produced from HEK293T cells transfected with BTN1A1 cDNA clone (Cat# RC223852) using MegaTran 2.0 (Cat# [TT210002]).