

Product datasheet for **RC220673**

BTN3A3 (NM_006994) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	BTN3A3 (NM_006994) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	BTN3A3
Synonyms:	BTF3; BTN3.3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC220673 representing NM_006994
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGAAATGGCAAGTTCCTGGCTTTCCTTCTGCTCAACTTTCATGTCTCCCTCTTCTTGGTCCAGCTGC
 TCACTCCTTGCTCAGCTCAGTTTTCTGTGCTTGGACCCTCTGGGCCATCCTGGCCATGGTGGTGAAGA
 CGCTGATCTGCCCTGTACCTGTCCCGACCATGAGTGCAGAGACCATGGAGCTGAGGTGGTGAAGTCC
 AGCCTAAGGCAGGTGGTGAACGTGTATGCAGATGGAAAGGAAGTGAAGACAGGCAGAGTGCACCGTATC
 GAGGGAGAAGTTCGATTCTGCGGGATGGCATCACTGCAGGGAAGGCTGCTCTCGAATACACAACGTAC
 AGCCTCTGACAGTGGAAAGTACTTGTGTTATTTCCAAGATGGTGACTTCTACGAAAAAGCCCTGGTGGAG
 CTGAAGGTTGCAGCATTGGGTTCTGATCTTACATTGAAGTGAAGGTTATGAGGATGGAGGGATCCATC
 TGGAGTGCAGGTCCACTGGTGGTACCCCCAACCCAAAATAAAGTGGAGCGACACCAAGGGAGAGAACAT
 CCCGGCTGTGGAAGCACCTGTGGTTCAGATGGAGTGGGCTGTATGCAGTAGCAGCATCTGTGATCATG
 AGAGGCAGCTCTGGTGGGGGTGTATCCTGCATCATCAGAAATTCCTCCTCGGCCTGGAAAAAGACAGCCA
 GCATATCCATCGCAGACCCCTTCTCAGGAGCGCCAGCCCTGGATCGCGGCCCTGGCAGGGACCCTGCC
 TATCTCGTTGCTGCTTCTCGCAGGAGCCAGTTACTTCTTGTGGAGACAACAGAAGAAAAAATTGCTCTG
 TCCAGGGAGACAGAAAGAGAGCGAGAGATGAAAGAAATGGGATACGCTGCAACAGAGCAAGAAATAAGCC
 TAAGAGAGAAGCTCCAGGAGGAAGTCAAGTGGAGGAAAAATCCAGTACATGGCTCGTGGAGAGAAGCTTT
 GGCCTATCATGAATGGAAGTGGCCCTCTCAACCTGCGGATGTGATTCTGGATCCAGACACGGCAAC
 GCCATCTCCTTGTCTGAGGACCAGAGGAGTGTGCAGCGTGTGAAGAGCCCGGGATCTGCCAGACA
 ACCCTGAGAGATTTGAATGGCGTTACTGTCTTGGCTGTGAAAACTTACATCAGGGAGACATTACTG
 GGAGGTGGAAGTGGGGGACAGAAAAGAGTGGCATATTGGGGTATGTAGTAAGAACGTGGAGAGGAAAAAA
 GGTTGGGTCAAAATGACACCGGAGAACGGATACTGGACTATGGGCTGACTGATGGGAATAAGTATCGGG
 CTCTCACTGAGCCAGAACCAACCTGAACTTCTGAGCCTCCTAGGAAAGTGGGATCTTCTGGACTA
 TGAGACTGGAGAGATCTCGTTCTATAATGCCACAGATGGATCTCATATCTACACCTTTCGACGCGCTCT
 TTCTCTGAGCCTCTATATCCTGTTTTCAGAATTTTGACCTTGGAGCCACTGCCCTGACCATTTGCCAA
 TACCAAAAAGAGTAGAGAGTTCCTCCGATCCTGACCTAGTGCCTGATCATTCCCTGGAGACACCCTGAC
 CCCGGCTTAGCTAATGAAAGTGGGAGCCTCAGGCTGAAGTAACTCTCTGCTTCTCCCTGCCACCCCT
 GGAGCTGAGGTCTCCCTTCTGCAACAACCAATCAGAACCATAAGCTACAGGCACGCACTGAAGCACTTT
 AC

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC220673 representing NM_006994
 Red=Cloning site Green=Tags(s)

MKMASSLAFLLLNFHVSFLVQLLTPCSAQFSVLGSPGILAMVGEDADLPCHLFPTMSAETMELRWSS
 SLRQVVNVYADGKEVEDRQSAPYRGRSILRDGITAGKAALRIHNVTASDSGKYL CYFQDGFYEKALVE
 LKVAALGSDLHIEVKGYEDGGIHL ECRSTGWYPQPIKWSDTKGENIPAVEAPVVADGVGLYAVAASVIM
 RGSSGGGVSCIIRNSLLGLEKTASISIA DPF FRSAPWIAALAGTLPISLLLLAGASYFLWRQKEKIAL
 SRETEREREMKEMGYAATEQEISLREKLQEELKWRKIQYMARGEKSLAYHEWKMALFKPADVILDPDTAN
 AILLVSEDQRSVQRAEPRDLPDNERFEWRYCVLGCENFTSGRHYWEVEVGDREWHIGVCSKNVERKK
 GWVKMTPENGYWTMGLTDGNKYRALTEPRNLKLP EPPRKVGI FLDYETGEISFY NATDGS HIYTFPHAS
 FSEPLYPVFRILTLEPTALTICPIKVESSPDPDLVPDHSLETP LTPGLANESGEPQAEVTSLLLP AHP
 GAEVSPSATTNQNHKLQARTEALY

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk8008_e11.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_006994

ORF Size: 1752 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_006994.5](#)

RefSeq Size: 2956 bp

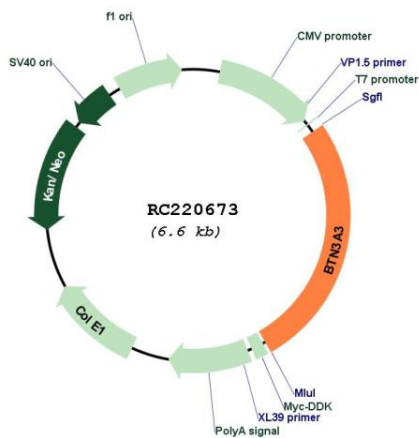
RefSeq ORF: 1755 bp

Locus ID: 10384

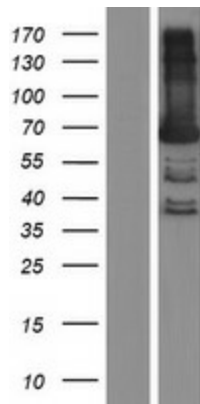
UniProt ID: [O00478](#)
Cytogenetics: 6p22.2
Domains: IGv, IG, SPRY, PRY
Protein Families: Druggable Genome, Transmembrane
MW: 64.8 kDa
Gene Summary:

The butyrophilin (BTN) genes are a group of major histocompatibility complex (MHC)-associated genes that encode type I membrane proteins with 2 extracellular immunoglobulin (Ig) domains and an intracellular B30.2 (PRYSPRY) domain. Three subfamilies of human BTN genes are located in the MHC class I region: the single-copy BTN1A1 gene (MIM 601610) and the BTN2 (e.g., BTN2A1; MIM 613590) and BTN3 (e.g., BNT3A3) genes, which have undergone tandem duplication, resulting in 3 copies of each (summary by Smith et al., 2010 [PubMed 20208008]).[supplied by OMIM, Nov 2010]

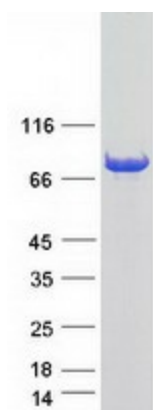
Product images:



Circular map for RC220673



Western blot validation of overexpression lysate (Cat# [LY416277]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC220673 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified BTN3A3 protein (Cat# [TP320673]). The protein was produced from HEK293T cells transfected with BTN3A3 cDNA clone (Cat# RC220673) using MegaTran 2.0 (Cat# [TT210002]).