

## Product datasheet for MR212112

### Numa1 (NM\_133947) Mouse Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Numa1 (NM_133947) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Numa1
Synonyms:	6720401E04Rik; AA764025; AL022610; AU014979; NuMA
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>MR212112 representing NM_133947 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGACACTCCATGCCACCCGGGCGAGCTACGCTCCTTTCTGGGTGAACAGTCTGCATGTTGCTGACCCCG  
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GGGGCTCAGTCACTGCCAGTTGACCTCTATGACAGGGCTCAATGCCACCCTGCAGCAGCGAGATCAAG  
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Protein Sequence: >MR212112 representing NM\_133947  
 Red=Cloning site Green=Tags(s)

MTLHATRAATLLSWVNSLHVADPVETVLQLQDCSIFIKIINTIHDTKEGQQILQQPLPERLDFVCSFLQK  
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 VGITTRQQRKRVSETHQGPPTPESKATSCFPRPMTPRDRHEGRKQSSTADTQKKAAPVLKQADRRRQSM  
 AFSILNTPKKLGNSSLRRGASKKTPAKVSPNPRSGTRRSPRIATTTTGTATVATTTPRAKGVKH

TRTRPLEQKLI SEEDLAANDILDYKDDDDKV

Chromatograms: [https://cdn.origene.com/chromatograms/mm9106\\_c10.zip](https://cdn.origene.com/chromatograms/mm9106_c10.zip)

Restriction Sites: SgfI-MluI

## Cloning Scheme:



ACCN: NM\_133947

ORF Size: 6282 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\\_133947.3](#), [NP\\_598708.3](#)

RefSeq Size: 7214 bp

RefSeq ORF: 6285 bp

Locus ID: 101706

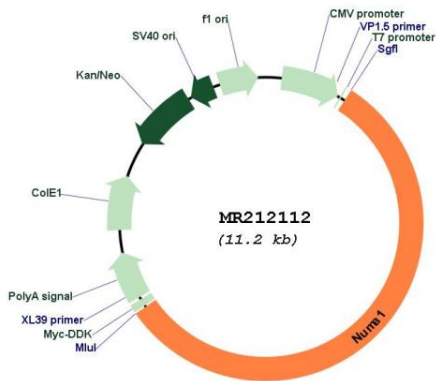
UniProt ID: [E9Q7G0](#)

Cytogenetics: 7 E2

**MW:** 235.6 kDa

**Gene Summary:** Microtubule (MT)-binding protein that plays a role in the formation and maintenance of the spindle poles and the alignment and the segregation of chromosomes during mitotic cell division (PubMed:19255246, PubMed:24109598, PubMed:26765568). Functions to tether the minus ends of MTs at the spindle poles, which is critical for the establishment and maintenance of the spindle poles (PubMed:26765568). Plays a role in the establishment of the mitotic spindle orientation during metaphase and elongation during anaphase in a dynein-dynactin-dependent manner (PubMed:26765568). In metaphase, part of a ternary complex composed of GPSP2 and G(i) alpha proteins, that regulates the recruitment and anchorage of the dynein-dynactin complex in the mitotic cell cortex regions situated above the two spindle poles, and hence regulates the correct orientation of the mitotic spindle (PubMed:24109598, PubMed:26765568). During anaphase, mediates the recruitment and accumulation of the dynein-dynactin complex at the cell membrane of the polar cortical region through direct association with phosphatidylinositol 4,5-bisphosphate (PI(4,5)P2), and hence participates in the regulation of the spindle elongation and chromosome segregation. Binds also to other polyanionic phosphoinositides, such as phosphatidylinositol 3-phosphate (PIP), lysophosphatidic acid (LPA) and phosphatidylinositol triphosphate (PIP3), in vitro (By similarity). Also required for proper orientation of the mitotic spindle during asymmetric cell divisions (PubMed:26765568). Plays a role in mitotic MT aster assembly. Involved in anastral spindle assembly. Positively regulates TNKS protein localization to spindle poles in mitosis. Highly abundant component of the nuclear matrix where it may serve a non-mitotic structural role, occupies the majority of the nuclear volume (By similarity). Required for epidermal differentiation and hair follicle morphogenesis (PubMed:26765568).[UniProtKB/Swiss-Prot Function]

**Product images:**



Circular map for MR212112