

## SYNPO2

### Identity

**Note** Myopodin probably represents an alternative splicing variant of synaptopodin 2. The predicted synaptopodin 2 contains 1021 amino acid and myopodin 698. The extra 323 amino acid in synaptopodin 2 is located at the N-terminus.

**Other names** **Myopodin**

**synaptopodin 2**

**Hugo** **SYNPO2**

**Location** 4q27

### DNA/RNA



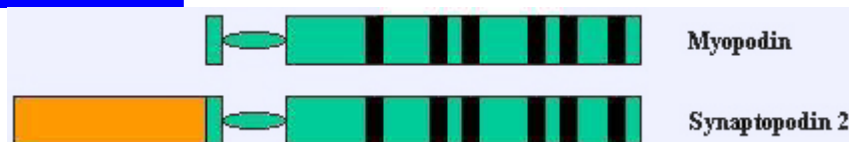
Genome structure of myopodin and synaptopodin 2. Green represents exons of myopodin, and orange synaptopodin 2. Introns are indicated with lines.

**Description** The genome sequence of myopodin contains 6.8 Kb, while synaptopodin 2 38 kb.

**Transcription** A typical messenger RNA of myopodin is 4.2-4.4 kb, and synaptopodin 2 6.7 kb.

**Pseudogene** Unknown

### Protein



Protein structure of myopodin and synaptopodin 2. Orange represents sequence unique to synaptopodin 2, Green myopodin. Black stripe represents sequence homologous to synaptopodin 1.

**Description** A nuclear localization signal is identified in N-terminus region of myopodin. Myopodin also contains six stretches of homologous sequences with synaptopodin 1.

**Expression** Skeletal muscle, prostate, large and small intestine.

**Localisation** Nucleus, cytoplasm.

**Function** Actin bundling.

**Homology** Synaptopodin

### Mutations

**Germinal** Not known

**Somatic** Deletion

### Implicated in

**Disease** Prostate cancer and [urothelial cell carcinoma](#).

Prognosis Deletion preferentially occurs in aggressive type of prostate cancer. Loss of expression in nucleus in urothelial cell carcinoma is predictive of poor clinical outcome.

Cytogenetics Not known

## External links

### Nomenclature

[Hugo](#) [SYNPO2](#)  
[GDB](#) [SYNPO2](#)  
[Entrez Gene](#) [SYNPO2\\_171024](#) synaptopodin 2

### Cards

[GeneCards](#) [SYNPO2](#)  
[Ensembl](#) [SYNPO2](#)  
[CancerGene](#) [SYNPO2](#)  
[Genatlas](#) [SYNPO2](#)  
[GeneLynx](#) [SYNPO2](#)  
[eGenome](#) [SYNPO2](#)  
[euGene](#) [171024](#)

### Genomic and cartography

[GoldenPath](#) [SYNPO2](#) - [4q27](#) [chr4:120167599-120340005](#) + [4q26](#) (hg17-May\_2004)  
[Ensembl](#) [SYNPO2](#) - [4q26](#) [[CytoView](#)]  
[NCBI](#) [Genes Cyto](#) [Gene Seq](#) [[Map View](#) - NCBI]  
[HomoloGene](#) [SYNPO2](#)

### Gene and transcription

[Genbank](#) [AF177291](#) [SRS] [AF177291](#) [ENTREZ]  
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[RefSeq](#) [NT\\_016354](#) [SRS] [NT\\_016354](#) [ENTREZ]  
[AceView](#) [SYNPO2](#) AceView - NCBI  
[TRASER](#) [SYNPO2](#) Traser - Stanford  
[Unigene](#) [Hs.480615](#) [SRS] [Hs.480615](#) [NCBI] [HS480615](#) [spliceNest]

### Protein : pattern, domain, 3D structure

[SwissProt](#) [Q9UMS6](#) [SRS] [Q9UMS6](#) [EXPASY] [Q9UMS6](#) [INTERPRO]  
[Prosite](#) [PS50106 PDZ](#) [SRS] [PS50106 PDZ](#) [Expasy]  
[CluSTr](#) [Q9UMS6](#)  
[Blocks](#) [Q9UMS6](#)

### Polymorphism : SNP, mutations, diseases

[SNP](#) [SYNPO2](#) [dbSNP-NCBI]  
[SNP](#) [NM\\_133477](#) [SNP-NCI]  
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### General knowledge

[Family Browser](#) [SYNPO2](#) [UCSC Family Browser]  
[SOURCE](#) [NM\\_133477](#)  
[SMD](#) [Hs.480615](#)  
[SAGE](#) [Hs.480615](#)

[PubGene](#) [SYNPO2](#)

**Other databases**

**Probes**

[Probe](#) [SYNPO2 Related clones \(RZPD - Berlin\)](#)

**PubMed**

[PubMed](#) [3 Pubmed reference\(s\) in LocusLink](#)

### **Bibliography**

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Am J Pathol. 2001; 159(5): 1603-1612.

Medline [11696420](#)

**Differentiation- and stress-dependent nuclear cytoplasmic redistribution of myopodin, a novel actin-bundling protein**

Weins A, Schwarz K, Faul C, Barisoni L, Linke WA, Mundel P.

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Sanchez-Carbayo M, Schwarz K, Charytonowicz E, Cordon-Cardo C, Mundel P.

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Medline [12917631](#)

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### **Contributor(s)**

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