MYCN (myc myelocytomatosis viral related oncogene, neuroblastoma derived)

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**Identity**

**DNA/RNA**

*Description*

3 exons.

**Protein**

*Description*

464 amino acids; contains a phosphorylation site, an acidic domain, an HLH motif, and a leucine zipper in C-term; forms heterodimers with MAX and recognize the core consensus sequence CACCTG.

**Expression**

During fetal development.

**Localisation**

Nuclear.

**Function**

Probable transcription factor; possible role during tissue differentiation.

**Homology**

With members of the myc family of helix-loop-helix transcription factors.
Mutations

Somatic

Amplification, either in extrachromosomal double minutes or in homogeneously staining regions within chromosomes (there is amplification when, for example, 10 to 1000 copies of a gene are present in a cell); found amplified in a variety of human tumours, in particular in and also in retinoblastoma, small cell lung carcinoma, astrocytoma; level of amplification related to the tumour progression; transgenic mice that overexpress MYCN in neuroectodermal cells develop neuroblastoma.

Implicated in Neuroblastoma Oncogenesis

MYCN amplification is found in 15% of neuroblastoma, is an adverse prognostic feature per se, and is often associated with other adverse features (older age, abdominal tumour, advanced disease, and high lactate dehydrogenase, ferritin, and neuron-specific enolase serum levels).

References


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