

## Gene Section

### Short Communication

# CARS (cysteinyj-tRNA synthetase)

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### Identity

**Other names:** cysteine-tRNA ligase; cysteinease-translase

**HGNC (Hugo):** CARS

**Location:** 11p15.5

**Location (base pair):** 3272

**Local order:** 700 kb telomeric to NUP98.

### DNA/RNA

#### Description

The gene spans 57 kb; 22 exons; 2,5 kb cDNA.

#### Transcription

Alternate splicing.

### Protein

#### Description

748 amino acids, 85 kDa. Forms homodimers.

#### Localisation

Cytoplasmic.

### Implicated in

#### **Inflammatory myofibroblastic tumors with a complex t(2;11)(p23;p15)**

##### Disease

Rare soft tissue tumour found in children and young adults.

##### Prognosis

Good prognosis.

##### Hybrid/Mutated gene

5' CARS - 3' ALK

##### Abnormal protein

N-term CARS (606 amino acids) fused to the usual 562 C-term amino acids of ALK.

### References

Cools J, Wlodarska I, Somers R, Mentens N, Pedeutour F, Maes B, De Wolf-Peeters C, Pauwels P, Hagemeijer A, Marynen P. Identification of novel fusion partners of ALK, the anaplastic lymphoma kinase, in anaplastic large-cell lymphoma and inflammatory myofibroblastic tumor. *Genes Chromosomes Cancer*. 2002 Aug;34(4):354-62

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