BACKGROUND

The septins are a family of GTPase enzymes, some of which are required for cytokinesis and others of which are associated with exocytosis. Members of the septin family can form heteropolymer complexes and also play a role in the organization of new growth in organisms. The transcriptional regulation of all septins is complex, resulting in alternatively spliced variants. At least three septins (Septin 1, 2 and 4) are associated with a Tau-based paired helical filament core and may contribute to the formation of neurofibrillary tangle as integral constituents of paired helical filaments. Septin 3 (G-Septin), a GTP-binding protein, is highly expressed in brain and is regulated by protein kinase G in neurons. The human SEPT4 (H5/PNUTL2/CDCrREL-2) gene encodes ARTS (for apoptosis-related protein in the TGFβ signaling pathway), which is expressed in many cells and acts to enhance cell death induced by TGFβ or, to a lesser extent, by other apoptotic agents. ARTS is localized to mitochondria and translocates to the nucleus when apoptosis occurs. Septin 5 is a major form of the CDCREL-1 septin in the adult neocortex of mammals. Human Septin 6 protein contains an ATP-GTP binding motif and three nuclear targeting sequences in its C-terminus. Septin 6 is the third septin member that is fused to the MLL protein, in addition to hCDCREL and MSF.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: SEPT4 (human) mapping to 17q22-q23; Sept4 (mouse) mapping to 11 C.

SOURCE

Septin 4 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Septin 4 of human origin.