BACKGROUND

VAX2 (Ventral anterior homeobox 2) is a 290 amino acid homeobox protein that is expressed in the ventral portion of the early developing retina. Localized to the nucleus, VAX2 plays a crucial role in development of the eye, particularly in the specification of the ventral optic vesicle and in establishment of a correct dorsoventral pattern. VAX2 acts as a transcription factor with VAX1 to cooperatively regulate retinal differentiation, neuroepithelial cell proliferation and axial polarization in the retina. Together, VAX1 and VAX2 repress transcription of Pax-6, a strong inducer of retinal differentiation, neuroepithelial cell proliferation and axial polarization in the retina. Once Pax-6 is repressed, retinal differentiation slows, thus allowing for proper development of the optic nerve. VAX2 contains one homeobox DNA-binding domain and belongs to the EMX homeobox family of proteins.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: VAX2 (human) mapping to 2p13.3; Vax2 (mouse) mapping to 6 C3.

SOURCE

VAX2 (VAX2A8F12) is a mouse monoclonal antibody raised against a recombinant protein corresponding to a region near the C-terminus of VAX2 of human origin.

PRODUCT

Each vial contains 100 µg IgG1 in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

STORAGE

For immediate and continuous use, store at 4°C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

RESEARCH USE

For research use only, not for use in diagnostic procedures.