BACKGROUND

FDPS (farnesyl diphosphate synthase), also known as FPS or FPPS, is a 419 amino acid enzyme belonging to the FPP/GGPP synthetase family. Localized to cytoplasm and peroxisome, FDPS expression is regulated by phorbol esters and polyunsaturated fatty acids. FDPS assists in cholesterol biosynthesis, post-translational protein modifications and synthesis of steroid hormones in the isoprenoid pathway. FDPS catalyzes the formation of farnesyl diphosphate (FPP), a precursor for several classes of essential metabolites including sterols, dolichols, carotenoids and ubiquinones. FDPS is inactivated by interferon-induced RSAD2, which may result in the disruption of lipid rafts at the plasma membrane. Existing as a homodimer, FDPS may have anti-viral effects when inactivated by RSAD2. Reduced activity of FDPS in liver may partly be the cause of Zellweger syndrome and neonatal adrenoleukodystrophy, both of which are known to be peroxisomal deficiency diseases.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: FDPS (human) mapping to 1q22; Fdps (mouse) mapping to 3 F1.

SOURCE

FDPS (E-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of FDPS of human origin.

RESEARCH USE

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