



FabGennix Inc.
INTERNATIONAL

New Item
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Stargart-like very long chain fatty acid elongation factor (Elovl4) antibodies

Anti-ELOVL4 antibodies (Elo-100P and Elo-101AP; Elo-112AP and Elo-121AP)

Autosomal dominant Stargardt-like macular dystrophy (STGD3) is one of the early onset macular dystrophies. STGD3 and autosomal dominant macular dystrophy (adMD) are inherited forms of macular degeneration characterized by decreased visual acuity, macular atrophy and extensive fundus flecks (1). STGD3 and adMD share phenotypic characters with atrophic age-related macular degeneration (AMD). Mutations in a photoreceptor cell-specific factor involved in the elongation of very long chain fatty acids (**ELOVL4**) were shown to be linked with STGD3, adMD, and other pattern dystrophy. The ELOVL4 gene is homologous to mammalian and yeast enzymes involved in the membrane-bound fatty acid chain elongation system (1). Bioinformatic and proteomic analysis of **ELOVL4** revealed that it has homology to a group of yeast proteins that function in the biosynthesis of very long chain fatty acids. **ELOVL4**, a photoreceptor-specific gene, has been associated with autosomal dominant (ad) macular dystrophy phenotypes in five related families, in which phenotypes range from Stargardt-like macular dystrophy (STGD3; Mendelian Inheritance in Man 600110) to pattern dystrophy. A 5-bp mutation in this gene has been associated with Stargardt-like acular degeneration (STGD). There has been several sequence variation in the ELOVL4 gene in AMD. These variations include 8 variations in the coding region for ELOVL4 protein and 4 in the non-coding region (1). Recently a second mutation in the **ELOVL4** gene segregating with macular dystrophy phenotypes confirms the role of this gene in a subset of dominant macular dystrophies with a wide range of clinical expressions and suggests a role for modifying genes and/or environmental factors in AMD disease process. (2) It has been suggested that alterations in the biosynthesis of fatty acids may be implicated in the pathogenesis of inherited macular degeneration

The ELOVL4 protein is a 38-39 kDa protein expressed in RPEs. The ELOVL4 antibodies were generated against three epitopes from the N-terminus, a mid-region and one from the C-terminal end of the ELOVL4 protein. Anti-ELOVL4 antibodies were generated against KLH conjugated peptides that are unique to only ELOVL protein. These polyclonal antibodies label a 37-39 kDa protein in RPE cell extracts. Anti-ELOVL4-selective antibodies are also available in affinity-purified form for confocal, Western blotting and immunocytochemical analyses. *FabGennix Inc.* will also conjugate antibodies with fluorescent probes upon request at extra charge. *FabGennix Inc.* also provides antibodies against proteins that are involved in retinal degenerative diseases such as various Anti-PDE antibodies, Anti-EFEMP1, Anti-Orphan receptor G-75; Anti-Bestrophin, Anti-Myocilin (TIGR) and a Usher syndrome specific Anti-USH2a antibody. *FabGennix Inc.* employs cyclic peptide methodology for generating antibodies, which results in higher titer and specificity (6). *FabGennix Inc.*, will also provide Western blot positive controls for most of these antibodies in ready-to-use buffer for easy identification of respective proteins. Limited quantities of antigens are also available. Please enquire for their availability before ordering.

Catalog #	Host Species	Nature	Cross reactivity	Quantity	Price
ELO-100P	Rabbit	Polyclonal Antibody	R, M, H	100 µl	205
ELO-101AP	Rabbit	Affinity purified Antibody	R, M, H	250ug	470
ELO-110P	Rabbit	Polyclonal Antibody	R, M, H	100 ul	205
ELO-112AP	Rabbit	Affinity purified Antibody	R, H, M	100 µg	225
ELO-120P	Rabbit	Polyclonal Antibody	R, H, M	100 ul	205
ELO-121AP	Rabbit	Affinity purified Antibody	R, H, M	250 ug	450
P-ELO100	n/a	Antigenic peptide	100 ul	250 ug	115
P-ELO-110	n/a	Antigenic peptide	100 ul	250 ug	115
P-ELO-120	n/a	Antigenic peptide	100 ul	250 ug	115

R = rat; M = mouse; H = human; C = chicken; monk = monkey ; * not all variants are labeled equally

(Note: Antigenic blocking peptides for all three antibodies are also available in limited quantities. Please inquire about their availability).

Immunogen: Synthetic peptide for Elo-100P antibody (GLL DSE PGS VLN VVS TAL NDT-amide)
Synthetic peptide for Elo-110P antibody (SYI CQS VDY SNN VHE-amide)
Synthetic peptide for Elo-120P antibody (SEK QLM IEN GKK QKN GKA KGD C)

concentration: Elo-101AP/Elo-112AP/Elo-121AP IgG concentration 0.5-0.95mg/ml in antibody, stabilization buffer.

Applications: Antibodies Elo-101AP and Elo-112AP are used for W B applications at 1:500 dilutions. Other applications for this antibody have not been tested. The dilutions for this antibody is for reference only, investigators are expected to determine the optimal conditions for specific assay. Elo-121AP also works well in Western blot analyses but with lower efficiency. Recommended dilutions: WB 1:500; IMM and & i.p pull-down assays: n.d

Reactivity: The ELO-101AP/Elo-112AP detects a 37-39 kDa ELOV14 protein in human RPE cell extracts.

References:

1. Edwards AO, Donoso LA, Ritter R 3rd. Invest Ophthalmol Vis Sci 2001 Oct;42(11):2652-63
2. Ayyagari R. Zhang K. Hutchinson A. Yu Z. et. Al.,
3. Bernstein PS. Tammur J. Singh N. Hutchinson A. et al.,

* For users who may require large amounts of ELOVL4 neat serum or affinity purified antibodies, please enquire about bulk material discounts.

This Product is for Research Use Only and is NOT intended for use in humans or clinical diagnosis.

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