

COLQ (S-14): sc-69157

BACKGROUND

COLQ (collagen-like tail subunit (single strand of homotrimer) of asymmetric acetylcholinesterase), also known as EAD, is a 455 amino acid protein that localizes to the end plate of skeletal muscle. COLQ anchors the catalytic subunits of asymmetric AChE (acetylcholinesterase) to the basal lamina at the neuromuscular junctions of vertebrates. Mutations of COLQ lead to congenital myasthenic syndromes, which are rare autosomal recessive diseases characterized by general weakness increased by exertion, ophthalmoplegia and refractoriness to anticholinesterase drugs. Eight isoforms exist due to alternative splicing events.

REFERENCES

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2. Ishigaki, K., et al. 2003. Two novel mutations in the COLQ gene cause end-plate acetylcholinesterase deficiency. *Neuromuscul. Disord.* 13: 236-244.
3. Lee, H.H., et al. 2004. Transcriptional regulation of acetylcholinesterase-associated collagen COLQ: differential expression in fast and slow twitch muscle fibers is driven by distinct promoters. *J. Biol. Chem.* 279: 27098-27107.
4. Ting, A.K., et al. 2005. Transcriptional regulation of acetylcholinesterase-associated collagen COLQ in fast- and slow-twitch muscle fibers. *Chem. Biol. Interact.* 157-158: 63-70.
5. Girard, E., et al. 2006. Remodeling of the neuromuscular junction in mice with deleted exons 5 and 6 of acetylcholinesterase. *J. Mol. Neurosci.* 30: 99-100.
6. Tsim, K.W., et al. 2006. Transcriptional control of different acetylcholinesterase subunits in formation and maintenance of vertebrate neuromuscular junctions. *J. Mol. Neurosci.* 30: 189-192.
7. Schreiner, F., et al. 2007. Novel COLQ mutation 950delC in synaptic congenital myasthenic syndrome and symptomatic heterozygous relatives. *Neuromuscul. Disord.* 17: 262-265.
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CHROMOSOMAL LOCATION

Genetic locus: COLQ (human) mapping to 3p25.1; Colq (mouse) mapping to 14 B.

SOURCE

COLQ (S-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of COLQ of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-69157 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

COLQ (S-14) is recommended for detection of COLQ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for COLQ siRNA (h): sc-72964, COLQ siRNA (m): sc-72965, COLQ shRNA Plasmid (h): sc-72964-SH, COLQ shRNA Plasmid (m): sc-72965-SH, COLQ shRNA (h) Lentiviral Particles: sc-72964-V and COLQ shRNA (m) Lentiviral Particles: sc-72965-V.

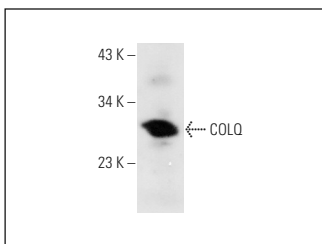
Molecular Weight of COLQ isoforms I-VIII: 28-48 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or human skeletal muscle extract: sc-363776.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



COLQ (S-14): sc-69157. Western blot analysis of COLQ expression in human skeletal muscle tissue extract.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.