BCO1 Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	BCO1, Polyclonal Antibody
Full Product Name	BCO1 Antibody; FITC conjugated
Product Gene Name	anti-BCO1 antibody
Product Synonym Names	Beta; beta-carotene 15; 15'-monooxygenase; Beta-carotene dioxygenase 1; Beta-carotene oxygenase 1; BCO1
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Liquid
Purity/Purification	>95%,Protein G purified
Preparation and Storage	Shipped at 4 degree C. Upon delivery, aliquot and store at -20 degree C or -80 degree C.
Matching Pairs	Unconjugated Antibody: BCO1 (MBS7001904) FITC Conjugated Antibody: BCO1 (MBS7005296)
Molecular Weight	62,637 Da
OMIM	115300
3D Structure	ModBase 3D Structure for Q9HAY6
Immunogen	Recombinant human Beta,beta-carotene 15,15'-monooxygenase protein
Conjugation	FITC
Storage Buffer	Preservative: 0.03% Proclin 300 Constituents: 50% Glycerol, 0.01M PBS, PH 7.4
Santa Cruz Alternative	Potential replacement for Santa Cruz Biotechnology antibody catalog# sc-163736
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for anti-BCO1 antibody	ELISA (EIA)
Related Product Information for anti-BCO1 antibody	Symmetrically cleaves beta-carotene into two molecules of retinal. The reaction proceeds in three stages, epoxidation of the 15,15'-double bond, hydration of the double bond leading to ring opening, and oxidative cleavage of the diol formed.
Other Notes	Small volumes of anti-BCO1 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for BCO1 purchase	MBS7005296 is an antibody targeting BCO1. Also known as BCO1 Antibody; FITC conjugated. Reactive in Human. Host: Rabbit.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for BCO1. It may not necessarily be applicable to this product.

NCBI GI #	74027270

NCBI GeneID	53630
NCBI Accession #	NP_059125.2
UniProt Primary Accession #	Q9HAY6
UniProt Secondary Accession #	Q9NVH5; A0AV48; A0AV50
UniProt Related Accession #	Q9HAY6
GenBank Nucleotide #	NM_017429.2
NCBI Official Full Name	beta,beta-carotene 15,15'-dioxygenase
NCBI Official Synonym Full Names	beta-carotene oxygenase 1
NCBI Official Symbol	BCO1
NCBI Official Synonym Symbols	BCO; BCDO; BCMO; BCDO1; BCMO1
UniProt Protein Name	Beta,beta-carotene 15,15'-dioxygenase
UniProt Synonym Protein Names	Beta-carotene dioxygenase 1; Beta-carotene oxygenase 1
Protein Family	Beta,beta-carotene 15,15'-dioxygenase
UniProt Gene Name	BCO1
UniProt Entry Name	BCDO1_HUMAN
NCBI Protein Information	beta,beta-carotene 15,15'-dioxygenase
NCBI Summary for BCO1	Vitamin A metabolism is important for vital processes such as vision, embryonic development, cell differentiation, and membrane and skin protection. The protein encoded by this gene is a key enzyme in beta-carotene metabolism to vitamin A. It catalyzes the oxidative cleavage of beta,beta-carotene into two retinal molecules. [provided by RefSeq, Jul 2008]
UniProt Comments for BCO1	BCMO1: Symmetrically cleaves beta-carotene into two molecules of retinal. The reaction proceeds in three stages, epoxidation of the 15,15'-double bond, hydration of the double bond leading to ring opening, and oxidative cleavage of the diol formed. Defects in BCMO1 are the cause of autosomal dominant hypercarotenemia and vitamin A deficiency (ADHVAD). Vitamin A is essential for normal embryonic development as well as normal physiological functions in children and adults. Hypercarotenemia is characterized by an excess carotene in the serum, but unlike excess vitamin A, carotene is non-toxic. So far, only a few cases of excess vitamin A have been reported. Individuals were thought to be vitamin A deficient due to an impairment in the conversion of carotenoids to retinal in the intestine. Belongs to the carotenoid oxygenase family. Protein type: Cofactor and Vitamin Metabolism - retinol; Oxidoreductase; EC 1.14.99.36 Chromosomal Location of Human Ortholog: 16q23.2 Cellular Component: cytosol Molecular Function: beta-carotene 15,15'-monooxygenase activity; metal ion binding Biological Process: fat-soluble vitamin metabolic process; phototransduction, visible light; retinal metabolic process; retinoid metabolic process; retinol metabolic process; vitamin A biosynthetic process; vitamin metabolic process Disease: Hypercarotenemia And Vitamin A Deficiency, Autosomal Dominant
Research Articles on BCO1	**1.** Data suggest that beta-cryptoxanthin is a poorer substrate for BCMO1 than is beta-carotene; however, the comparatively high bioavailability of beta-cryptoxanthin from foods makes beta-cryptoxanthin-rich fruits good sources of vitamin A. [REVIEW]
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