BCO1 Lysate – Tissue Lysate

PRODUCT OVERVIEW

Product Name	BCO1, Lysate
Full Product Name	Human BCO1 Protein Lysate
Product Gene Name	BCO1 lysate
Product Synonym Names	BCO1; BCDO; BCDO1; BCMO; BCMO1; BCO
Host	Human
Form/Format	Lyophilized
Preparation and Storage	Store at -20 degree C Once reconsituted, aliquot and store any remaining material at-20 degree C to avoid repeated freeze-thaw cycles.
Molecular Weight	63kDa
OMIM	115300
3D Structure	ModBase 3D Structure for Q9HAY6
Related Product Information for BCO1 lysate	Human BCO1 Protein Lysate 20ug is provided as a Lyophilized powder. This is a Recombinant Protein Lysate produced in HEK293T cells. This protein lysate can be reconsituted using SDS Sample Buffer.
Other Notes	Small volumes of BCO1 lysate 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	MBS137916 is a lysate targeting BCO1. Also known as Human BCO1 Protein Lysate. Host: Human.

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
UniProt Primary Accession #	Q9HAY6
UniProt Related Accession #	Q9HAY6
GenBank Nucleotide #	NM_017429
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'-monooxygenase
UniProt Synonym Protein Names	Beta-carotene dioxygenase 1
Protein Family	Beta,beta-carotene 15,15'-dioxygenase

UniProt Gene Name	BCMO1
UniProt Synonym Gene Names	BCDO; BCDO1
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; EC 1.14.99.36; Oxidoreductase Chromosomal Location of Human Ortholog: 16q23.2 Cellular Component: cytosol Molecular Function: beta-carotene 15,15'-monooxygenase activity; metal ion binding; monooxygenase activity Biological Process: phototransduction, visible light; vitamin A biosynthetic process; retinal metabolic process; retinol metabolic process; retinoid metabolic process Disease: Hypercarotenemia And Vitamin A Deficiency, Autosomal Dominant
Research Articles on BCO1	**1.** We did not observe associations of BCMO1 variants and lung cancer.
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