

Human CHI3L1 / YKL40 Protein (His Tag)



Sino Biological
Biological Solution Specialist

Catalog Number: 11227-H08H

General Information

Gene Name Synonym:

ASRT7; CGP-39; DKFZp686N19119; FLJ38139; GP-39; GP39; HC-gp39; hCGP-39; HCGP-3P; YKL-40; YKL40; YYL-40

Protein Construction:

A DNA sequence encoding the human CHI3L1 (NP_001267.2) (Met 1-Thr 383) was fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Predicted N terminal: Tyr 22

Molecular Mass:

The recombinant human CHI3L1 consists of 373 amino acids and has a predicted molecular mass of 42 kDa as estimated in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, 10% Glycerol, pH 7.4.

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Stability & Storage:

Samples are stable for twelve months from date of receipt at -20°C to -80°C.

Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Chitinase-3-like protein 1 (CHI3L1) is a secreted heparin-binding glycoprotein whose expression is associated with vascular smooth muscle cell migration. CHI3L1 is expressed at high levels in postconfluent nodular VSMC cultures and at low levels in subconfluent proliferating cultures. CHI3L1 is a tissue-restricted, chitin-binding lectin and member of glycosyl hydrolase family 18. In contrast to many other monocyte / macrophage markers, its expression is absent in monocytes and strong induced during late stages of human macrophage differentiation. Elevated levels of CHI3L1 are associated with disorders exhibiting increased connective tissue turnover, such as rheumatoid arthritis, osteoarthritis, scleroderma, and cirrhosis of liver, but is produced in cartilage from old donors or patients with osteoarthritis. CHI3L1 is abnormally expressed in the hippocampus of subjects with schizophrenia and may be involved in the cellular response to various environmental events that are reported to increase the risk of schizophrenia.

References

1. Zhao XZH, *et al.* (2007) Functional Variants in the Promoter Region of Chitinase 3-Like 1 (CHI3L1) and Susceptibility to Schizophrenia. *The American Journal of Human Genetics*. 80 (1): 12-18.
2. Rehli M, *et al.* (2003) Transcriptional Regulation of CHI3L1, a Marker Gene for Late Stages of Macrophage Differentiation. *The Journal of Biological Chemistry*. 278: 44058-67.
3. Nishikawa KC, *et al.* (2003) gp38k (CHI3L1) is a novel adhesion and migration factor for vascular cells. *Experimental Cell Research*. 287 (1): 79-87

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Tel: +86-400-890-9989 (Global), +1-215-583-7898 (USA), +49(0)6196 9678656 (Europe)

Website: <http://www.sinobiological.com>