

Human CTRL-1 / CTRL / Chymotrypsin-like protease Protein (His Tag)

Catalog Number: 13748-H08H



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Biological Solution Specialist

General Information

Gene Name Synonym:

CTRL1; 0910001G08Rik; 1810004D15Rik; AV005227; chymopasin; Ctra-1; Ctra1; mFLJ00366

Protein Construction:

A DNA sequence encoding the human CTRL (P40313) (Met1-Asn264) was expressed with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: (36.0+62.4) % as determined by SDS-PAGE

Endotoxin:

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

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Cys 19

Molecular Mass:

The recombinant human CTRL consists of 257 amino acids and predicts a molecular mass of 27.6 KDa. It migrates as an approximately 35 and 32KDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, 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

Storage:

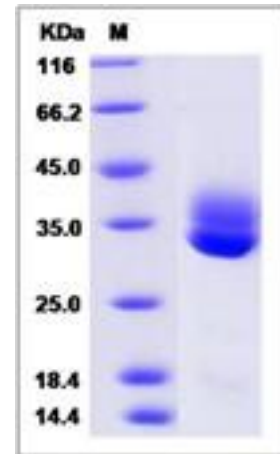
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

CTRL-1, also known as chymotrypsin-like protease, belongs to the peptidase S1 family. CTRL-1 contains 1 peptidase S1 domain. Its expression is increased in preeclampsia (PE). Placental-derived chymotrypsin-like protease is responsible for inducing endothelial inflammatory phenotypic changes possibly by upregulation of cell adhesion molecule expressions, activation of cellular protease, and induction of extracellular regulated kinase phosphorylation. Activated microglia have been observed in various neurodegenerative diseases, including Alzheimer's disease (AD), Parkinson's disease (PD), amyotrophic lateral sclerosis, and multiple sclerosis. Five structurally distinct inhibitors that are known to inhibit chymotrypsin-like proteases were partially protective. They might represent a novel class of drugs with benefit in diseases where overactivity of microglia contributes to the pathogenesis.

References

1. Yang Gu. et al., 2009, Reprod Sci. 16 (9): 905-13.
2. Klegeris A. et al., 2005, Glia. 51 (1):56-64.
3. Caroline V. Bamford. et al., 2007, Infect Immun. 75 (9): 4364-72.

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