Human ABHD10 Protein (aa 53-306, His Tag)

Catalog Number: **14439-H07B**

General Information

Gene Name Synonym:

ABHD10

Protein Construction:

A DNA sequence encoding the human ABHD10 (Q9NUJ1)(Thr53-Asn306) was fused with a polyhistide tag at the N-terminus.

Source: Human

Expression Host: Baculovirus-Insect Cells

QC Testing

Purity: > 90 % 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 ℃

Predicted N terminal: His

Molecular Mass:

The recombinant human ABHD10 consists of 271 amino acids and has a calculated molecular mass of 30.3 kDa. The recombinant protein migrates as an approximately 32 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20mM Tris, 500mM NaCl, 10% glycerol, pH 8.0.

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:

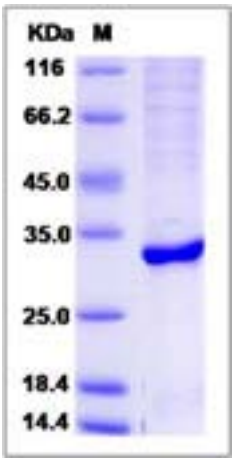
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Mycophenolic acid (MPA), the active metabolite of the immunosuppressant mycophenolate mofetil (MMF), is primarily metabolized by glucuronidation to a phenolic glucuronide (MPAG) and an acyl glucuronide (AcMPAG). It is known that AcMPAG, which may be an immunotoxic metabolite, is deglucuronidated in human liver. AcMPAG deglucuronidation activity was detected in both human liver cytosol (HLC) and microsomes (HLM). By purification from HLC with column chromatographic purification steps, the enzyme responsible for AcMPAG deglucuronidationis identified as α/β hydrolase domain containing 10 (ABHD10). Recombinant ABHD10 expressed in Sf9 cells efficiently deglucuronidated AcMPAG with a K(m) value of 100.7 ± 10.2 μM, which was similar to those in HLM, HLC, and human liver homogenates (HLH). Immunoblot analysis revealed ABHD10 protein expression in both HLC and HLM. The AcMPAG deglucuronidation by recombinant ABHD10, HLC, and HLH were potently inhibited by AgNO(3), CdCl(2), CuCl(2), PMSF, bis-p-nitrophenylphosphate, and DTNB. The CL(int) value of AcMPAG formation from MPA, which was catalyzed by human UGT2B7, in HLH was increased by 1.8-fold in the presence of PMSF. Thus, human ABHD10 would affect the formation of AcMPAG, the immunotoxic metabolite.

References

1.Nardini M. et al., 1999, Curr Opin Struct Biol. 9 (6): 732-7. 2.Carr PD. et al., 2009, Protein Pept Lett. 16 (10): 1137-48. 3.Cheah E. et al., 1992, Protein Eng. 5 (3): 197-211.