Human IDO2 Protein (His Tag)

Catalog Number: **13614-H08E**

General Information

Gene Name Synonym:

INDOL1

Protein Construction:

A DNA sequence encoding the human IDO2 (Q6ZQW0-1) (Met 14-Gly 420) was fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 93 % as determined by SDS-PAGE

Endotoxin:

Please contact us for more information.

Stability:

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

Predicted N terminal: Met 1

Molecular Mass:

The recombinant human IDO2 comprises 413 amino acids and has a calculated molecular mass of 46.2 KDa. It migrates as an approximately 43 kDa band in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile PBS, 20% glycerol, pH 7.5

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:

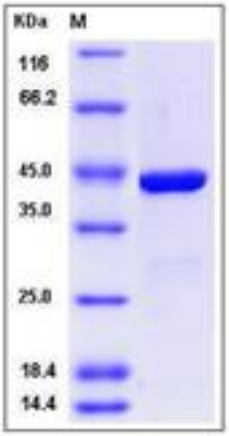
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

IDO2 belongs to the indoleamine 2,3-dioxygenase family. Indoleamine 2,3-dioxgyenase (IDO), is a cytosolic haem protein which, together with the hepatic enzyme tryptophan 2,3-dioxygenase, catalyzes the conversion of tryptophan and other indole derivatives to kynurenines. In addition to classic IDO (IDO1), a new variant, IDO2, has recently been described. IDO2 is expressed in liver, small intestine, spleen, placenta, thymus, lung, brain, kidney, and colon. IDO is widely distributed in human tissues, its physiological role is not fully understood but is of great interest. IDO can be up-regulated via cytokines such as interferon-gamma, and can thereby modulate the levels of tryptophan, which is vital for cell growth. In humans and mice, the IDO1 and IDO2 genes are present tandemly in a tail-to-head arrangment on chromosome 8. In lower vertebrates such as zebrafish and toads only a single IDO gene may be present that may be more IDO2-like in structure. This closer relationship to IDO2 suggests that IDO2 may actually be the ancestor of the better characterized IDO1 gene, and that IDO1 might have been generated by gene duplication of IDO2 before the origin of tetrapods in mammalian evolutionary history. IDO2 catalyzes the first and rate-limiting step in the kynurenine pathway of tryptophan catabolism.

References

1.Witkiewicz AK, *et al*. (2009) Genotyping and expression analysis of IDO2 in human pancreatic cancer: a novel, active target. J Am Coll Surg. 208 (5): 781-7. 2.Sorensen RB, *et al*. (2011) Spontaneous cytotoxic T-Cell reactivity against indoleamine 2,3-dioxygenase-2. Cancer Res. 71 (6): 2038-44. 3.Witkiewicz AK, *et al*. (2009) Genotyping and expression analysis of IDO2 in human pancreatic cancer: a novel, active target. J Am Coll Surg. 208 (5): 781-7.