Human IZUMO1 Protein (His Tag)

Catalog Number: **13520-H08H**

General Information

Gene Name Synonym:

IZUMO

Protein Construction:

A DNA sequence encoding the human IZUMO1 (AAH34769.1) (Met1-Arg292) was expressed 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

Stability:

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

Predicted N terminal: Cys 22

Molecular Mass:

The recombinant human IZUMO1 consists of 282 amino acids and predicts a molecular mass of 32.1 KDa. It migrates as an approximately 43 KDa 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:

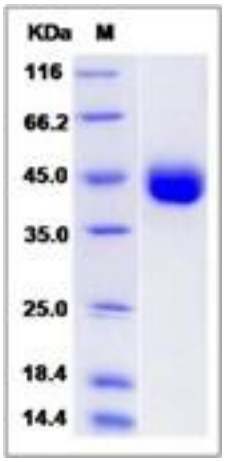
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Izumo is a sperm membrane protein which plays a key role in the fusion in the mouse. It has an Immunoglobulin (Ig) domain and an N-terminal domain for which neither the functions nor homologous sequences are known. Up to now, there four members has an N-terminal domain with significant homology to the N-terminal domain of Izumo. We call this domain Izumo domain. The four proteins are Izumo 1, 2, 3, and 4. Izumo domain possesses the ability to form dimers, whereas the transmembrane domain or the cytoplasmic domain or both of Izumo 1 are required for the formation of multimers of higher order. Izumo 1-3 are transmembrane proteins expressed specifically in the testis, and Izumo 4 is a soluble protein expressed in the testis and in other tissues. Izumo 1, 3, and 4 formed protein complexes on sperm, Izumo 1 forming several larger complexes and Izumo 3 and 4 forming a single larger complex. Izumo1 is essential for sperm-egg plasma membrane binding and fusion.

References

1.Inoue N, *et al*. (2008) Putative sperm fusion protein IZUMO and the role of N-glycosylation. Biochem Biophys Res Commun. 377(3):910-4. 2.Ikram MK, *et al*. (2010) Four novel Loci (19q13, 6q24, 12q24, and 5q14) influence the microcirculation in vivo. PLoS Genet. 6(10):e1001184. 3.Sklar P, *et al*. (2011) Large-scale genome-wide association analysis of bipolar disorder identifies a new susceptibility locus near ODZ4. Nat Genet. 43(10):977-83.