

Recombinant Human ZP3 cell lysate

Cat. No. ZP3-2099HCL **Lot. No.** (See product label)

SPECIFICATION

Product Overview

Species

Human

Description

The zona pellucida is an extracellular matrix that surrounds the oocyte and early embryo. It is composed primarily of three or four glycoproteins with various functions during fertilization and preimplantation development. The protein encoded by this gene is a structural component of the zona pellucida and functions in primary binding and induction of the sperm acrosome reaction. The nascent protein contains a N-terminal signal peptide sequence, a conserved ZP domain, a C-terminal consensus furin cleavage site, and a transmembrane domain. It is hypothesized that furin cleavage results in release of the mature protein from the plasma membrane for subsequent incorporation into the zona pellucida matrix. However, the requirement for furin cleavage in this process remains controversial based on mouse studies. A variation in the last exon of this gene has previously served as the basis for an additional ZP3 locus; however, sequence and literature review reveals that there is only one full-length ZP3 locus in the human genome. Another locus encoding a bipartite transcript designated POMZP3 contains a duplication of the last four exons of ZP3, including the above described variation, and maps closely to this gene.

Size

100 ul

Storage Buffer

1X Sample Buffer (50 mM Tris-HCl, 2% SDS, 10% glycerol, 300 mM 2-mercaptoethanol, 0.01% Bromophenol blue)

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Applications Western Blot;

GENE INFORMATION

Gene Name ZP3 zona pellucida glycoprotein 3 (sperm receptor) [Homo sapiens]

Official Symbol ZP3

Synonyms ZP3; zona pellucida glycoprotein 3 (sperm receptor); zona pellucida glycoprotein 3A (sperm receptor) , ZP3A, ZP3B; zona pellucida sperm-binding protein 3; ZP3 372; ZP3 424; ZP3A/ZP3B; sperm receptor; zona pellucida protein C; zona pellucida glycoprotein 3B; zona pellucida glycoprotein ZP3; zona pellucida glycoprotein 3A (sperm receptor); ZPC; ZP3A; ZP3B; Zp-3;

Gene ID 7784

mRNA Refseq NM_001110354

Protein Refseq NP_001103824

MIM 182889

UniProt ID P21754

Chromosome Location 7q11.23

Pathway Ovarian Infertility Genes, organism-specific biosystem;

Function acrosin binding; manganese ion transmembrane transporter activity; protein binding; receptor activity; signal transducer activity; sugar binding;

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