

DETECTION OF G1 GENOTYPE OF HUMAN CYSTIC ECHINOCOCCOSIS IN EGYPT

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Abbreviations

A	Adenine
Ab	Antibody
AE	Alveolar echinococcosis
Ag	Antigen
AHD	Alveolar hydatid disease
bp	Base pair
Buffer AE	Elusion buffer
Buffer AL	Lysis buffer
Buffer Aw1	Washing buffer 1

Buffer Aw2	Washing buffer 2
C	Cytosine
CAG	Circulating antigen
CE	Cystic echinococcosis
CFT	Complement fixation test
CHD	Cystic hydatid disease
CICs	Circulating immune complexes
CIEP	Counter-immunoelectrophoresis
CT	Computerized tomography
DD5	Arc-5 Double Diffusion
ddH2O	Doubled distilled water
DH	Definitive host
DNA	Deoxyribonucleic acid
DNase	Deoxyribonuclease
<i>E.granulosus</i>	<i>Echinococcus granulosus</i>
<i>E.multilocularis</i>	<i>Echinococcus multilocularis</i>
ELISA	Enzyme linked immunosorbent assay
FISH	Fluorescence in-situ hybridization
FNAB	Fine needle aspiration biopsy
G	Guanine
HCF	Hydatid cyst fluid
IDT	Intradermal test
IFAT	Indirect immunofluorescent antibody test
Ig	Immunoglobulin
IH	Intermediate host
IHAT	Indirect haemagglutination test
ISH	In-situ hybridization

KDa	Kilo Dalton
LAT	Latex agglutination test
LCR	Ligase chain reaction
MRI	Magnetic resonance imaging
PAIR	Percutaneous aspiration injection reaspiration
PCR	Polymerase chain reaction
QCRT-PCR	Quantitative competitive reverse transcriptase PCR
RAPD-PCR	Random amplified polymorphic DNA-PCR
RAST	Radioallergosorbent test
REs	Restriction endonucleases
RFLP	Restriction fragment length polymorphism
RNA	Ribonucleic acid
RT-PCR	Reverse transcriptase PCR
SDS-PAGE	Sodium dodecyl sulfate polyacrylamide gel electrophoresis
T	Thymine
U/S	Ultrasound
WB	Western blotting

Introduction

Human echinococcosis is a disease that results from parasitism by the larval stage of four *Echinococcus* species of which *Echinococcus granulosus* (*E.granulosus*) causing cystic hydatid disease and *E.multilocularis* causing alveolar hydatid disease are the most important. Minor species are *E.vogeli* causing polycystic hydatid disease and *E.oligarthrus* (**Goldsmith et al., 2005**).

Cystic echinococcosis (CE), termed “hydatid disease” or “hydatidosis” is caused by infection with the larval stage (metacestode) of the dog tapeworm *E.granulosus*. It is a major zoonosis of worldwide distribution and is especially prevalent in sheep raising countries (**McManus et al., 2003**). The disease is characterized by long – term growth of metacestode cysts in humans and domestic animals. It is not only important as a public health problem in areas where the disease is endemic, but also responsible for significant economic loss in livestock (**Li et al., 2003**).

CE is considered as an emerging disease in various regions, e.g. the Middle East, Central Asia, and Northern and Eastern Africa (**Eckert et al., 2001**).

Now, it is well recognized that *E.granulosus* exhibits extensive intraspecific (strain) variation that may impact the diagnosis, epidemiology, pathology and control of hydatid disease. It has also important implications for the design and