ALPHA DIAGNOSTIC INTERNATIONAL

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Product Specification Sheet

Iceberg Antibodies

Cat. # ICEBERG11-P	Human Iceberg Control Peptide	**SIZE**: 100 ug
Cat. # ICEBERG11-S	Rabbit Anti-Human Iceberg antiserum	**SIZE**: 100 ul
Cat. # ICEBERG11-A	Rabbit Anti-Human Iceberg (affinity pure)	**SIZE**: 100 ug

Apoptosis or programmed cell death is a fundamental cellular process that is essential for normal tissue development and abnormal growth such as cancer, neurodegeneration, autoimmune diseases, and angiogenesis, etc. Apoptosis is driven by two classes of specialized proteases known as **caspases** (Cysteine Aspartase). The initiator caspases can be activated by self-cleavage. The effector caspases are then activated in an amplification cascade. **Caspase-1** (interleukin-1β converting enzyme (ICE)) is a cytoplasmic protease that converts 34 kDa inactive precursor IL-1β to the mature 17 kDa proinflamatory cytokine. Caspase-1 is synthesized as a single-chain polypeptide zymogen consisting of an N-terminal prodomain, and a large (p20) and a small (p10) catalytic domains. A serine/threonine kinase RIP2/CARDIAK/RICK binds caspase-1 and promotes its processing. RIP2 engages caspase-1 through a direct protein–protein interaction involving corresponding caspase recruitment domains (CARDs) present at the C terminus of RIP2 and within the prodomain of caspase-1. It is now shown that activation of caspase-1 is regulated by a small CARD-containing decoy molecule termed **ICEBERG**. This decoy protein binds the corresponding CARD motif of caspase-1, inhibiting and/or displacing the upstream activator RIP2. Structurally, ICEBERG has resemblance to the death-domain-fold superfamily. Human Iceberg is a 90-aa protein (11q21-q22). It is 52% identical to the caspase-1 CARD. It is primarily expressed in the heart and placenta. The related CARD-containing molecules caspase-1 and RIP2 are also expressed in the heart and placenta as well as in numerous other tissues.

Source of Antigen and Antibodies

Antigen	16-aa peptide from **human Iceberg** (1); **Designation (ICEBERG11-P, control peptide**) Epitope location ~ N-terminus
Ab Host/type	Rabbit, Polyclonal Unpurified antiserum (cat # ICEBERG11-S) and aff pure IgG (cat # ICEBERG11-A)purified over the antigen column
2ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available
-ve control	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)
100ul solution lyophilized powder
Supplied in Buffer: 0.05% azide
Reconstitute powder in 100 ul PBS

Affinity pure IgG
100 ug/100ul solution lyophilized powder
Supplied in **Buffer**: PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide
100 ug/100 ul solution lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at 20°C and powder at 4°C or -20°C..

Long-term: at –20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20°C or below.
Shipping: 4°C for solutions and room temp for powder

Recommended Usage

Western Blotting (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure antibody using ECL technique). The predicted size of iceberg is ~ 10 kDa.

ELISA: Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (1:10-50K for neat serum and 0.5-1 ug/ml for affinity pure).

Histochemistry & Immunofluorescence: Not tested. We recommend the use of affinity purified antibody at 5-20 ug/ml.

Specificity & Cross-reactivity

Human Iceberg11-P control peptide has no significant sequence homology with other proteins. Antibody cross-reactivity in various species has not been studied. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking to confirm antibody specificity.

General References:
Humke EW et al (2000) Cell 103, 99–111.

*This product is for In vitro research use only.

Related material available from ADI

Antibodies AIF, Apaf-1, Cytochrome-C, Caspases, IAPs, Survivin, EPR-1, CARD, and other Apoptosis related proteins, Aven

Recycle Immuno blots in Just 5-10 min. (use the same blot for various AIFs). (no boiling or pungent mercaptoethanol).

Iceberg11-S-A-P 71215S

India Contact:
Life Technologies (India) Pvt. Ltd.
306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444
Email: customerservice@lifetechindia.com Website: www.lifetechindia.com