ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Life Technologies™ Your Molecular & Cell Technology Partner

Caspase-11 (CASP-11, ICH-3, ICE-B) Antibodies

Cat. # CASP111-P	Mouse Caspase-11 Control Peptide	**SIZE**: 100 ug
Cat. # CASP111-S	Rabbit Anti-Mouse Caspase-11 antiserum	**SIZE**: 100 ug
Cat. # CASP111-A	Rabbit Anti-Mouse Caspase-11 IgG (aff pure)	**SIZE**: 100 ug

Apoptosis or programmed cell death is essential for normal tissue development and abnormal growth such as cancer, neurodegeneration, autoimmune diseases, and angiogenesis, etc. Apoptosis is driven by **caspases** (cysteine proteases that cleave after an aspartic acid residue). After the initial discovery of the first mammalian caspase 1 or ICE (interleukin 1 beta converting enzyme), a growing family of **caspases 1-14** have been cloned and characterized. Caspases are synthesized as inactive zymogen or proenzyme forms (30-55 kDa), which upon apoptotic stimulation are proteolytically processed (self or by other proteins) in a sequential manner into their active heterotetrameric forms. The processed form consists of large subunit (17-20 kDa) and a small (10-12 kDa) subunits, which may associate to form an active enzyme. Functionally active caspases initiate a proteolytic cascade, capable of cleaving and activating numerous cellular targets including PARP, G4-GDI, DFF, MEKK, etc. On a functional basis, two categories of caspases have been defined: the **initiator caspases** (caspases-8, -9, and –10) are activated in the earlier phases of apoptosis, whereas the **executioner caspases** (caspases-3, -6, and –7) are activated by initiator caspases and are responsible for dismantling cellular components.

Caspase-11, (also known as CASP-11, ICH-3, ICE-B) promotes IL-b processing by procaspase-1 (ICE) and therefore may also have a role in inflammatory response as evident by a 30 fold increase in CASP-11 activity by LPS. The mouse and rat CASP-11 (373aa) are most homologous to human CASP-4 (377aa) protein (ICErel-II, TX, ICH-2) and could possibly be the ortholog of human CASP-4. The pro-or zymogen form of CASP-11 is activated by Granzyme-B or cathepsin-B and the processed enzyme consists of two large p20 (20 k Da) and two small ~p10 (10kDa) subunits. CASP-11 is highly expressed in lung and spleen, weaker in heart and very little in liver, kidney, testis and skeletal muscle but has not been detected in the brain.

Source of Antigen and Antibodies

Antigen	13aa peptide (286-298aa) of **Mouse Caspase-11** (1); **Designated (CASP111-P or control peptide). conjugated to KLH**
Location	~C-terminal
Ab Host/type	Rabbit, polyclonal antiserum **#CASP11-S** and Aff pure IgG (**cat # CASP111-A**) purified over antigen-agarose column
2-ab	**Goat Anti-rabbit IgG-HRP** cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control	**Cat # 20009-1, Rabbit (non-immune) Serum IgG, purified, suitable for ELISA, Western, IHC as –ve control**

Recommended Usage

Western Blotting (1-10 ug/ml for affinity pure antibody using ECL technique). The antibody (**cat # CASP111-A**) reacts with
mouse CASP-11 but does not react with the human protein.
ELISA: Control peptide can be used to coat ELISA plates at
1 ug/ml and detected with antibodies (0.5-1 ug/ml for affinity pure).

Histochemistry & Immunofluorescence: Not tested.

Specificity & Cross-reactivity

Mouse CASP111-P control peptide is conserved in mouse and rat CASP-11 by 100 and 84%, respectively. Antibody (**cat # CASP111-A**) cross-reactivity in other species is not known. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (detailed protocol is available at the website).

General References: (1) Wang, S et al (1996) JBC 271, 20580; Van de Craen, M et al (1997) FEBS Lett 403, 61; Hur, J (2001) FEBS Lett 507, 157;

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified, undiluted)
100 ul/vial solution lyophilized powder
contains 0.05% sodium 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 -20OC and powder at 4oC or -20oC..

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

This product is for In vitro research use only.

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

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