Version 21-04/24

User's Manual

Mouse CIRP ELISA Kit

REF **DEIABL559**

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This product is for research use only and is not intended for diagnostic use.

For illustrative purposes only. To perform the assay the instructions for use provided with the kit have to be used.

Creative Diagnostics

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PRODUCT INFORMATION

Intended Use

The Mouse CIRP ELISA Kit is used for the quantitative measurement of mouse CIRP in cell lysate and other biological media.

This assay kit is for research use only and not for use in diagnostic or therapeutic procedures.

General Description

CIRP, also known as CIRBP (cold inducible RNA binding protein), is a 172 amino acids protein belonging to the glycine-rich RNA binding protein family, which possesses an amino-terminal RNA recognition motif, and a carboxyl-terminal glycine-rich domain consisting of several RGG motifs. CIRP is constitutively expressed in a wide variety of tissues and cells in low amounts and can be induced by cellular stresses such as cold shock, UV irradiation and hypoxia. Upon stress induction, CIRP shuttles from the nucleus to the cytoplasm to stabilize target mRNAs. CIRP might play a role in cellular processes such as transcription, translation and DNA

recombination. It acts as an RNA chaperone to facilitate translation and plays an important role in the circadian rhythm of living cells because CIRP is required for high-amplitude circadian gene expression.

Another side to the picture, it was reported that CIRP is increased and released into the bloodstream in response to hemorrhagic shock and sepsis. When CIRP triggers inflammation, it contributes to damage of organs in the body. In macrophages under hypoxic stress, CIRP translocates from the nucleus to the cytosol and is released. The activity of extracellular CIRP is mediated through the Toll-like receptor 4-myeloid differentiation factor 2 complex. In conclusion, extracellular CIRP is an endogenous proinflammatory mediator and damage associated molecular pattern (DAMP) that triggers inflammatory responses during hemorrhagic shock and

sepsis.

Reagents And Materials Provided

Microplate: One microplate supplied ready to use, with 96 wells (12 strips of 8-wells) in a foil, zip-lock bag with a desiccant pack. Wells are coated with anti-CIRP monoclonal antibody as a capture antibody.

10X Wash Buffer: One bottle containing 100 mL of 10X buffer containing Tween®-20

Dilution Buffer: One bottle containing 50 mL of 1X buffer; use for reconstitution of Mouse CIRP Standard and sample dilution. Ready to use.

Mouse CIRP Standard: One vial containing 500 ng of lyophilized recombinant mouse CIRP.

HRP conjugated Detection Antibody: One bottle containing 12 mL of HRP (horseradish peroxidase) conjugated anti-CIRP antibody. Ready to use.

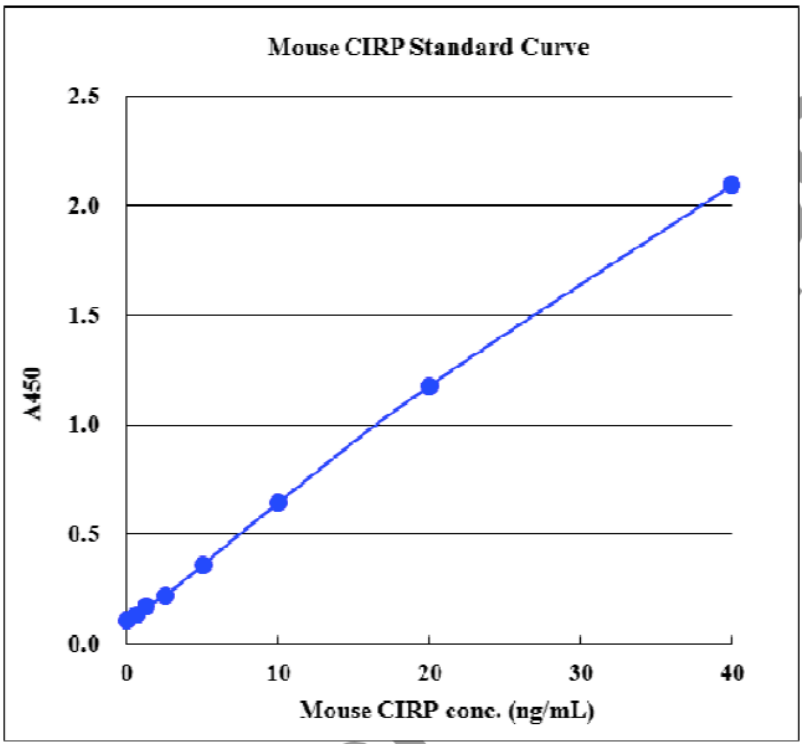
Substrate Reagent: One bottle containing 20 mL of the chromogenic substrate, tetra-methylbenzidine (TMB). Ready to use.

Stop Solution: One bottle containing 20 mL of 1 N H2SO4. Ready to use.

Storage

- Upon receipt store all components at 4°C.
- Don't expose reagents to excessive light.

Typical Standard Curve



Precision

Intra-assay (Within-Run, n=12) CV=2.0-5.1 %

Inter-assay (Run-to-Run, n=4) CV=1.1-8.8%

Sensitivity

The limit of detection (defined as such a concentration of mouse CIRP giving absorbance higher than mean absorbance of blank* plus three standard deviations of the absorbance of blank: A blank + 3SD blank) is better than 0.159 ng/mL of sample.