Product Name: IRP-1 (phospho Ser138) Rabbit Polyclonal Antibody
Catalog #: APRab04873

Summary

Production Name	IRP-1 (phospho Ser138) Rabbit Polyclonal Antibody
Description	Rabbit Polyclonal Antibody
Host	Rabbit
Application	ELISA,IHC,WB
Reactivity	Human,Mouse,Rat

Performance

Conjugation	Unconjugated
Modification	Phospho Antibody
Isotype	IgG
Clonality	Polyclonal
Form	Liquid
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.
Buffer	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Purification	Affinity purification

Immunogen

Gene Name	ACO1
Alternative Names	ACO1; IREB1; Cytoplasmic aconitate hydratase; Aconitase; Citrate hydro-lyase; Ferritin repressor protein; Iron regulatory protein 1; IRP1; Iron-responsive element-binding protein 1; IRE-BP 1
Gene ID	48.0
SwissProt ID	P21399.The antiserum was produced against synthesized peptide derived from human IREB1 around the phosphorylation site of Ser138. AA range:106-155

Application

Dilution Ratio	WB 1:500-2000 ,IHC 1:100 - 1:300. ELISA: 1:10000. Not yet tested in other applications.

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Molecular Weight

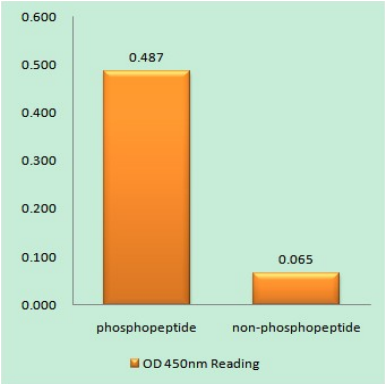
Background

The protein encoded by this gene is a bifunctional, cytosolic protein that functions as an essential enzyme in the TCA cycle and interacts with mRNA to control the levels of iron inside cells. When cellular iron levels are high, this protein binds to a 4Fe-4S cluster and functions as an aconitase. Aconitases are iron-sulfur proteins that function to catalyze the conversion of citrate to isocitrate. When cellular iron levels are low, the protein binds to iron-responsive elements (IREs), which are stem-loop structures found in the 5' UTR of ferritin mRNA, and in the 3' UTR of transferrin receptor mRNA. When the protein binds to IRE, it results in repression of translation of ferritin mRNA, and inhibition of degradation of the otherwise rapidly degraded transferrin receptor mRNA. The encoded protein has been identified as a moonlighting protein based on its ability to perform mechanistically distinctcatalytic activity:Citrate = isocitrate.,cofactor:Binds 1 4Fe-4S cluster per subunit.,function:Binds to iron-responsive elements (IRES), which are stem-loop structures found in the 5'-UTR of ferritin, and delta aminolevulinic acid synthase mRNAs, and in the 3'-UTR of transferrin receptor mRNA. Binding to the IRE element in ferritin results in the repression of its mRNA translation. Binding of the protein to the transferrin receptor mRNA inhibits the degradation of this otherwise rapidly degraded mRNA. This protein also expresses aconitase activity.,online information:Aconitase entry,similarity:Belongs to the aconitase/IPM isomerase family.,

Research Area

Citrate cycle (TCA cycle);Glyoxylate and dicarboxylate metabolism;

Image Data



Enzyme-Linked Immunosorbent Assay （Phospho-ELISA） for Immunogen Phosphopeptide （Phospho-left） and Non-Phosphopeptide （Phospho-right）, using IREB1 （Phospho-Ser138） Antibody

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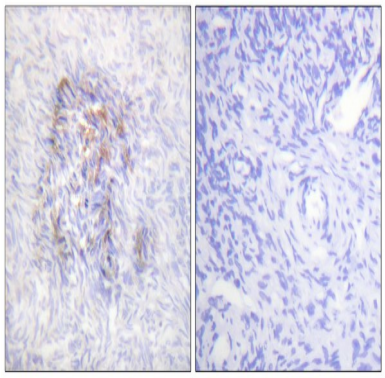
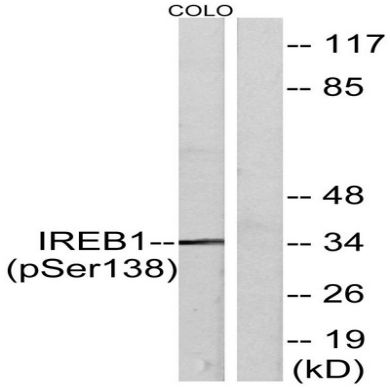


Immunohistochemistry analysis of paraffin-embedded human ovary, using IREB1 (Phospho-Ser138) Antibody. The picture on the right is blocked with the phospho peptide.



Western blot analysis of IREB1 (Phospho-Ser138) Antibody. The lane on the right is blocked with the IREB1 (Phospho-Ser138) peptide.

Note

For research use only.