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| Product name: | IRP-1 (phospho Ser138) Rabbit Polyclonal Antibody |
| Cat number: | ABN04873 |
| Conjugate: | Unconjugated |
| Size: | 100µL |
| Clone: | Polyclonal |
| Concentration: | 1mg/ml |
| Host: | Rabbit |
| Isotype: | IgG |
| Immunogen: | The antiserum was produced against synthesized peptide derived from human IREB1 around the phosphorylation site of Ser138. AA range:106-155 |
| Reactivity: | Human,Mouse,Rat |
| Applications: | WB 1:1000-1:5000,IHC 1:100-1:300,ICC/IF 1:200-1:1000,ELISA 1:5000-1:20000 |
| Purification: | Affinity purification |
| Form: | Liquid |
| Buffer: | Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N. |
| Storage: | Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles. |

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 distinct catalytic 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.,