



IRP-1 (phospho Ser138) Polyclonal Antibody

Catalog No	YP-Ab-03598
Isotype	IgG
Reactivity	Human;Mouse;Rat
Applications	IHC;IF;ELISA
Gene Name	ACO1
Immunogen	The antiserum was produced against synthesized peptide derived from human IREB1 around the phosphorylation site of Ser138. AA range:106-155
Specificity	Phospho-IRP-1 (S138) Polyclonal Antibody detects endogenous levels of IRP-1 protein only when phosphorylated at S138.
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source	Polyclonal, Rabbit,IgG
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Dilution	WB 1:500-2000 ,Immunohistochemistry: 1/100 - 1/300. Immunofluorescence: 1/200 - 1/1000. ELISA: 1/10000. Not yet tested in other applications.
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	ACO 1;ACO1;ACOC_HUMAN;Aconitase 1 soluble;Aconitase;Aconitase1;Aconitate hydratase;ACONS;Citrate hydro lyase;Citrate hydro-lyase;Cytoplasmic aconitate hydratase;Ferritin repressor protein;IRE BP 1;IRE-BP 1;IREB 1;IREB1;IREBP;IREBP1;Iron regulatory protein 1;Iron responsive element binding protein 1;Iron-responsive element-binding protein 1;IRP 1;IRP1;OTTHUMP45233;IRP-1
Observed Band	
Calculated Molecular Weight	
Cell Pathway	Cytoplasm, cytosol .
Tissue Specificity	Brain,Brain astrocytoma,Uterus,
Function	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.,

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

matters needing attention

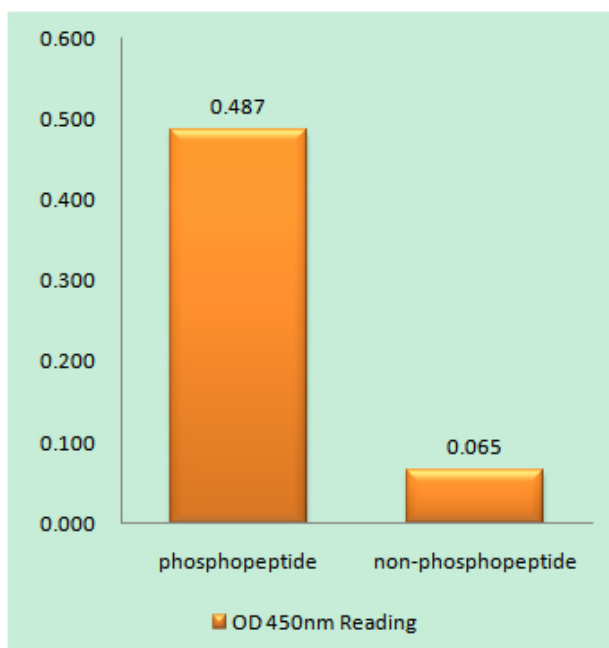
Avoid repeated freezing and thawing!

Usage suggestions

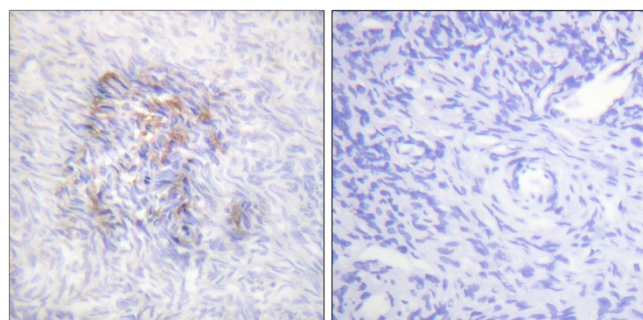
This product can be used in immunological reaction related experiments. For more information, please consult technical personnel.



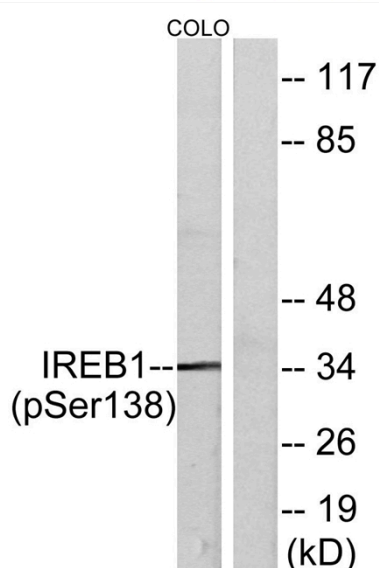
Products Images



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



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.