



IRP-1 (phospho Ser711) Monoclonal Antibody

Catalog No	BYmab-03575
Isotype	IgG
Reactivity	Human;Mouse;Rat;Monkey
Applications	WB
Gene Name	ACO1
Protein Name	Cytoplasmic aconitate hydratase
Immunogen	The antiserum was produced against synthesized peptide derived from human IREB1 around the phosphorylation site of Ser711. AA range:681-730
Specificity	Phospho-IRP-1 (S711) Monoclonal Antibody detects endogenous levels of IRP-1 protein only when phosphorylated at S711.
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Source	Monoclonal, Mouse,IgG
Purification	The antibody was affinity-purified from mouse antiserum by affinity-chromatography using epitope-specific immunogen.
Dilution	WB 1:500-2000
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	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
Observed Band	85kD
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.,

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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

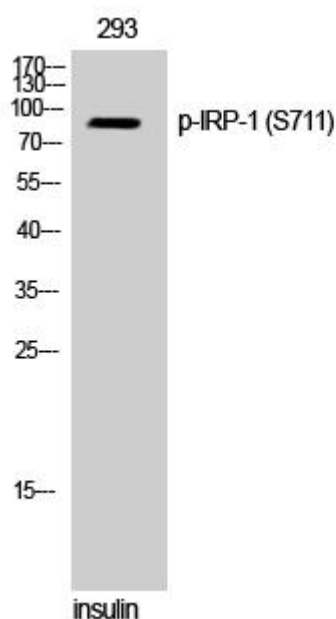
matters needing attention

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



Western Blot analysis of various cells using IRP-1 (phospho Ser711) Monoclonal Antibody