

IRP-1 Polyclonal Antibody

Description

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|--------------------------------|--|
| Product type | Primary Antibody |
| Code | BT-AP04640 |
| Host | Rabbit |
| Isotype | IgG |
| Size | 20ul, 50ul, 100ul |
| Immunogen | The antiserum was produced against synthesized peptide derived from human IREB1. AA range:681-730 |
| Mol wt | 98399 |
| Species reactivity | Human, Mouse, Rat |
| Clonality | Polyclonal |
| Recommended application | IHC-p, ELISA |
| Concentration | 1 mg/ml |
| Full name | IRP-1 Antibody |
| 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 |

This product is for research use only, not for use in human, therapeutic or diagnostic procedure.

Background

The protein encoded by ACO1 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 protein encoded by ACO1 has been identified as a moonlighting protein based on its ability to perform mechanistically distinct functions. Alternative splicing results in multiple transcript variants.

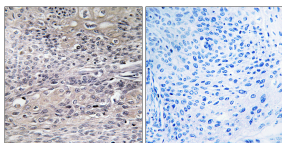
Recommended Dilution

IHC: 1: 100 - 1: 300

ELISA: 1: 20000

Not yet tested in other applications.

Images



Immunohistochemistry analysis of paraffin-embedded human thyroid gland tissue, using IREB1 Antibody. The picture on the right is blocked with the synthesized peptide.

Storage

-20°C for one year