

## ARG82129 Aconitase Activity Assay Kit (Colorimetric)

Package: 100 tests  
Store at: -20°C

### Summary

Product Description	ARG82129 Aconitase Activity Assay Kit (Colorimetric) can be used to measure Aconitase activity in cell lysate, tissue homogenate, serum.
Tested Reactivity	Hu, Ms, Rat, All
Tested Application	FuncSt
Target Name	Aconitase
Conjugation Note	Read at 565 nm
Sensitivity	0.5 U/L
Detection Range	0.5 - 100 U/L
Sample Type	cell lysate, tissue homogenate, serum
Sample Volume	20 µl
Alternate Names	HEL60; Aconitase; EC 4.2.1.3; Cytoplasmic aconitate hydratase; Ferritin repressor protein; IRP1; Iron regulatory protein 1; IRE-BP 1; Iron-responsive element-binding protein 1; Citrate hydro-lyase; ACONS; IREB1; IREBP; IREBP1

### Application Instructions

Application Note	Please note that this kit does not include a microplate.
Assay Time	30 min

### Properties

Form	Liquid
Storage instruction	Store the kit at -20°C. Do not expose test reagents to heat, sun or strong light during storage and usage. Please refer to the product user manual for detail temperatures of the components.
Note	For laboratory research only, not for drug, diagnostic or other use.

### Bioinformation

Gene Symbol	ACO1
Gene Full Name	aconitase 1, soluble
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 functions. Alternative splicing results in multiple transcript variants [provided by RefSeq, Jan 2014]

Function

Iron sensor. Binds a 4Fe-4S cluster and functions as aconitase when cellular iron levels are high. Functions as mRNA binding protein that regulates uptake, sequestration and utilization of iron when cellular iron levels are low. Binds to iron-responsive elements (IRES) in target mRNA species when iron levels are low. Binding of a 4Fe-4S cluster precludes RNA binding.

Catalyzes the isomerization of citrate to isocitrate via cis-aconitate. [UniProt]

Highlight

Related products:

[Aconitase antibodies](#); [Aconitase ELISA Kits](#);

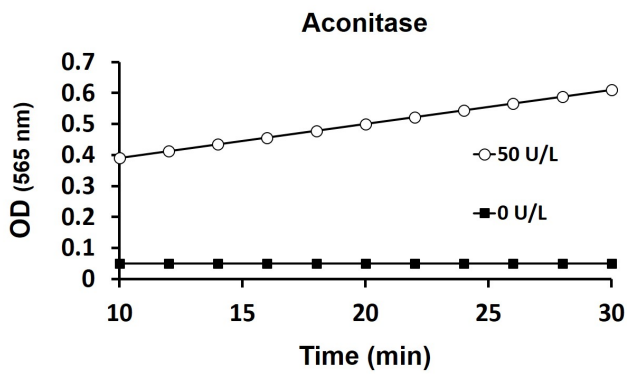
Related news:

[TCA intermediate fumarate promotes mitobiogenesis](#)

Cellular Localization

Cytoplasm. [UniProt]

Images



ARG82129 Aconitase Activity Assay Kit (Colorimetric) enzyme kinetics graph

Kinetics of 0 and 50 U/L Aconitase reaction, using ARG82129 Aconitase Activity Assay Kit (Colorimetric).