



## IVTScrip™ mRNA-Human ACO1, (Cap 1, Pseudo-UTP, 120 nt-poly(A))

Cat. No.: GTTS-WK10931MR

This product is for research use only and is not intended for diagnostic use.

### PRODUCT INFORMATION

#### Product overview

This product GTTS-WK10931MR is a type of mRNA having 120 nt poly(A) tail and modified with Cap 0 & Pseudo-UTP. It encodes the ACO1 protein. This product can be used in Oogenesis phase fetal germ cell-related researches.

#### Specifications

<b>Modified bases</b>	Pseudo-UTP
<b>5' Cap</b>	Cap 1
<b>Species</b>	Human
<b>RefSeq</b>	NM_001278352.2
<b>Applications</b>	Gene therapy research
<b>Format</b>	Powder
<b>Quantity</b>	100 µg
<b>Purification</b>	Chromatography

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## GENE INFORMATION

<b>Alternative Names</b>	IRP1; ACONS; HEL60; IREB1; IREBP; IREBP1
<b>Description</b>	<p>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]</p>