

## Human DUT Knockdown Cell Lysate

Cat. No. DUT-147HKCL Lot. No. (See product label)

### SPECIFICATION

<b>Product Overview</b>	WB-validated DUT Knockdown HeLa Cell Lysate
<b>Species</b>	Human
<b>Source</b>	HeLa
<b>Description</b>	<p>This gene encodes an essential enzyme of nucleotide metabolism. The encoded protein forms a ubiquitous, homotetrameric enzyme that hydrolyzes dUTP to dUMP and pyrophosphate. This reaction serves two cellular purposes: providing a precursor (dUMP) for the synthesis of thymine nucleotides needed for DNA replication, and limiting intracellular pools of dUTP. Elevated levels of dUTP lead to increased incorporation of uracil into DNA, which induces extensive excision repair mediated by uracil glycosylase. This repair process, resulting in the removal and reincorporation of dUTP, is self-defeating and leads to DNA fragmentation and cell death. Alternative splicing of this gene leads to different isoforms that localize to either the mitochondrion or nucleus. A related pseudogene is located on chromosome 19.</p>
<b>Form</b>	Cell-Tissue Lysis buffer
<b>Molecular Mass</b>	27 kDa
<b>Notes</b>	<p>Instruction of use: This knockdown cell lysate should be paired with wild-type HeLa cell lysate for use. For Western blotting, we recommend running wild-type and knockdown lysates on the same gel, and loading each well with equal volume and equal amount of total proteins.</p>

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<b>Storage</b>	Store at -20 centigrade for two years.
<b>Concentration</b>	Lot-specific
<b>Shipping</b>	Blue Ice
<b>Components</b>	1 vial of 100 µg WT HeLa cell lysate 1 vial of 100 µg DUT KD HeLa cell lysate
<b>Protein Families</b>	Druggable Genome
<b>Protein Pathways</b>	Metabolic pathways, Pyrimidine metabolism
<b>Lysate QC</b>	RT-qPCR; Western Blotting (WB)

## GENE INFORMATION

<b>Gene Name</b>	DUT deoxyuridine triphosphatase [ Homo sapiens (human) ]
<b>Official Symbol</b>	DUT
<b>Synonyms</b>	DUT; deoxyuridine triphosphatase; dUTP pyrophosphatase; deoxyuridine 5-triphosphate nucleotidohydrolase, mitochondrial; dUTPase; dUTP nucleotidohydrolase; FLJ20622;
<b>Gene ID</b>	1854
<b>mRNA Refseq</b>	NM_001025248
<b>Protein Refseq</b>	NP_001020419
<b>MIM</b>	601266

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