

# Cuproptosis Expanded Antibody Sampler Kit

Catalog Number: PK30029

## Description

The Cuproptosis Expanded Antibody Sampler Kit provides a cost-effective tool for studying key proteins involved in the cuproptosis pathway. Perfect for researchers starting a new project, screening multiple prospective targets, or those who simply require less volume.

## Product Information

Cuproptosis Expanded Antibody Sampler Kit 11

Antigen	Catalog No.	Host, clonality	Tested Reactivity	Applications	Volume
FDX1	<a href="#">82957-2-RR</a>	Rabbit Monoclonal	H	WB, IHC, IF/ICC, F C (Intra)	20 uL
DLAT	<a href="#">83654-3-RR</a>	Rabbit Monoclonal	H, M, Rt	WB, IHC, IF/ICC, F C (Intra)	20 uL
LIAS	<a href="#">11577-1-AP</a>	Rabbit Polyclonal	H, M, Rt	WB, IHC, IF, IP	20 uL
SLC31A1	<a href="#">67221-1-Ig</a>	Mouse Monoclonal	H	WB, IHC, IF-P	20 uL
DLD	<a href="#">67702-1-Ig</a>	Mouse Monoclonal	H, M, Rt	WB, IHC	20 uL
PDHB	<a href="#">68238-1-Ig</a>	Mouse monoclonal	H, M, Rt, Pg, Rb	WB, IHC, IF/ICC	20 uL
PDHA1	<a href="#">66119-1-Ig</a>	Mouse Monoclonal	H, M, Rt	WB, IP, IHC, IF/ICC	20 uL
ATP7B	<a href="#">85288-2-RR</a>	Rabbit Monoclonal	H, M, Rt	WB, IHC, IF-P, FC (Intra)	20 uL
GCSH	<a href="#">83012-5-RR</a>	Rabbit Monoclonal	H	WB	20 uL
DBT	<a href="#">12451-1-AP</a>	Rabbit Polyclonal	H, M, Rt	WB, IHC, IF/ICC	20 uL
GLS	<a href="#">81486-1-RR</a>	Rabbit Monoclonal	H, M, Rt	WB, IHC, IF-P, IF/ICC	20 uL

["Cuproptosis Essentials Antibody Sampler Kit"](#)

## Package

11× 20 uL

## Storage

Store at -20C. Stable for one year from the date of receipt.

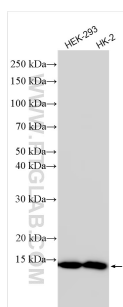
## Background Information

Cuproptosis is a novel form of cell death that is triggered by the accumulation of excess copper ions within the cell. This promotes aberrant lipoylation and protein aggregation, resulting in oxidative stress and impaired mitochondrial activity. Key regulators of cuproptosis include DLAT, FDX1, and LIAS. DLAT, a key component of the pyruvate dehydrogenase complex (PDC), is required for lipoylation and the activation of enzymes in the tricarboxylic acid cycle. During cuproptosis, increased copper levels cause aberrant lipoylation and aggregation of DLAT, resulting in mitochondrial dysfunction and cell death. LIAS, which is required for lipoic acid synthesis, ensures that TCA cycle enzymes such as DLAT remain stable and active. Disruption in LIAS function causes lipoylated proteins to aggregate pathologically, contributing to cuproptosis. FDX1 helps to mediate the cellular response to copper-induced stress. It contributes toward the reduction of iron-sulfur (Fe-S) clusters and regulation of copper ion homeostasis and redox processes. Dysregulation of additional proteins such as SLC31A1 and DLD may also contribute to increased copper uptake and sensitivity to cuproptosis respectively.

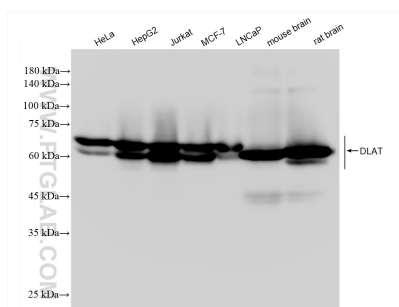
## Standard Protocols

Click [here](#) to view our standard protocols for various applications including WB, IP, IHC, IF, FC, and ELISA.

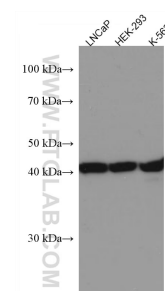
## Validation Data



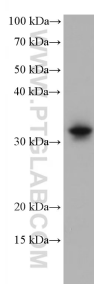
Various lysates were subjected to SDS PAGE followed by western blot with 82957-2-RR (FDX1 antibody) at dilution of 1:3000 incubated at room temperature for 1.5 hours.



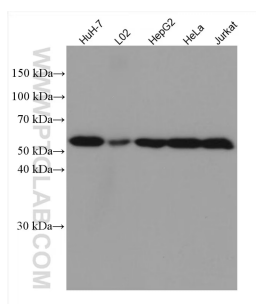
Various lysates were subjected to SDS PAGE followed by western blot with 83654-3-RR (DLAT antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



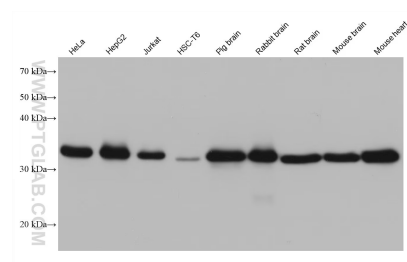
Various lysates were subjected to SDS PAGE followed by western blot with 67298-1-Ig (LIAS antibody) at dilution of 1:3000 incubated at room temperature for 1.5 hours.



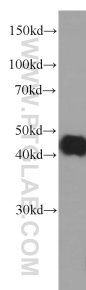
HepG2 cells were subjected to SDS PAGE followed by western blot with 67221-1-Ig (SLC31A1 antibody) at dilution of 1:20000 incubated at room temperature for 1.5 hours.



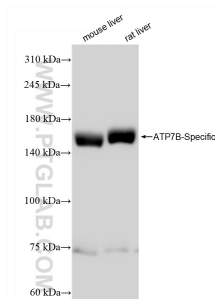
Various lysates were subjected to SDS PAGE followed by western blot with 67702-1-Ig (DLD antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours.



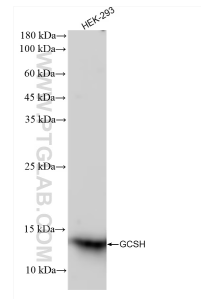
Various lysates were subjected to SDS PAGE followed by western blot with 68238-1-Ig (PDHB antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



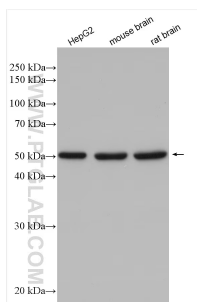
HepG2 cells were subjected to SDS PAGE followed by western blot with 66119-1-Ig (PDH E1a antibody) at dilution of 1:20000 incubated at room temperature for 1.5 hours.



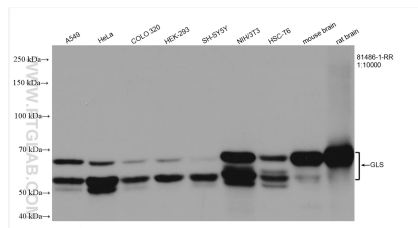
Various lysates were subjected to SDS PAGE followed by western blot with 85288-2-RR (ATP7B-Specific antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



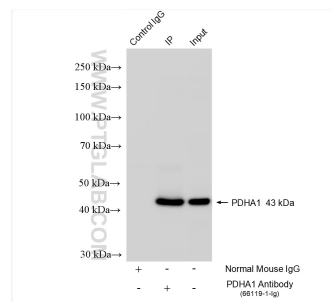
HEK-293 cells were subjected to SDS PAGE followed by western blot with 83012-5-RR (GCSH antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



Various lysates were subjected to SDS PAGE followed by western blot with 12451-1-AP (DBT antibody) at dilution of 1:15000 incubated at room temperature for 1.5 hours.



Various lysates were subjected to SDS PAGE followed by western blot with 81486-1-RR (GLS antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



IP result of anti-PDH E1 Alpha (IP:66119-1-Ig, 4ug; Detection:66119-1-Ig 1:10000) with K-562 cells lysate 1820 ug.

For technical support and original validation data for this product please contact

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