

Cuproptosis Essentials Antibody Sampler Kit

Catalog Number: PK30028

Description

The Cuproptosis Essentials 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 Essentials Antibody Sampler Kit 5

Antigen	Catalog No.	Host, clonality	Tested Reactivity	Applications	Volume
FDX1	82957-2-RR	Rabbit Monoclonal	H	WB, IHC, IF/ICC, F C (Intra)	20 uL
DLAT	83654-3-RR	Rabbit Monoclonal	H, M, Rt	WB, IHC, IF/ICC, F C (Intra)	20 uL
LIAS	11577-1-AP	Rabbit Polyclonal	H, M, Rt	WB, IHC, IF, IP	20 uL
SLC31A1	67221-1-Ig	Mouse Monoclonal	H	WB, IHC, IF-P	20 uL
DLD	67702-1-Ig	Mouse Monoclonal	H, M, Rt	WB, IHC	20 uL

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

Package

5 × 20 uL

Storage

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

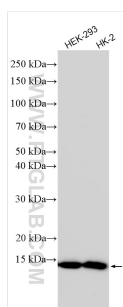
Background Information

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.

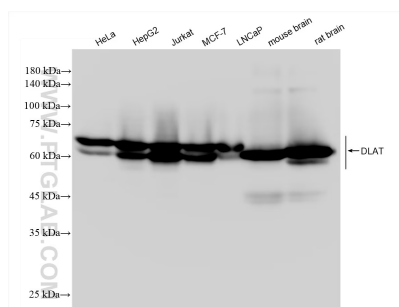
Standard Protocols

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

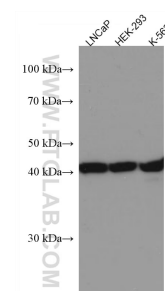
Validation Data



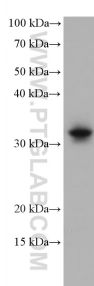
Various lysates were subjected to SDS PAGE followed by western blot with 82957-2-RR (FDX1 antibody) at dilution of 1:3000 incubated at room temperature for 1.5 hours.



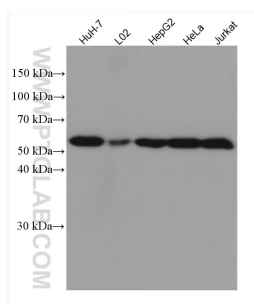
Various lysates were subjected to SDS PAGE followed by western blot with 83654-3-RR (DLAT antibody) at dilution of 1:10000 incubated at room temperature for 1.5 hours.



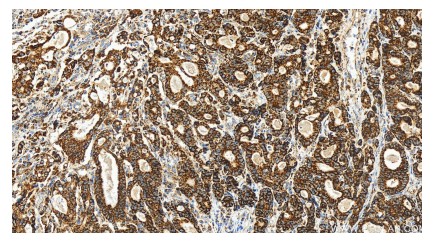
Various lysates were subjected to SDS PAGE followed by western blot with 67298-1-Ig (LIAS antibody) at dilution of 1:3000 incubated at room temperature for 1.5 hours.



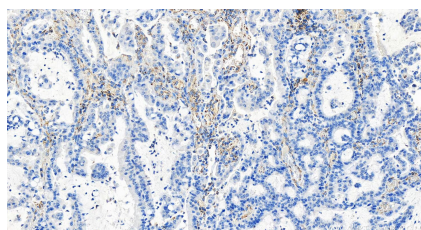
HepG2 cells were subjected to SDS PAGE followed by western blot with 67221-1-Ig (SLC31A1 antibody) at dilution of 1:20000 incubated at room temperature for 1.5 hours.



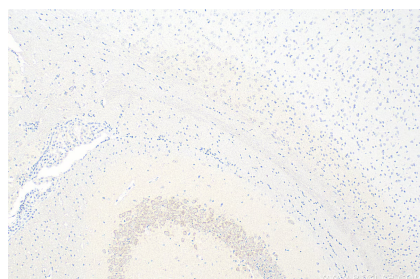
Various lysates were subjected to SDS PAGE followed by western blot with 67702-1-Ig (DLD antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours.



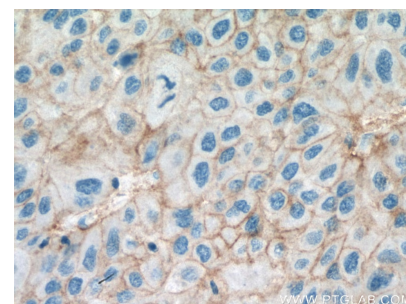
Immunohistochemical analysis of paraffin-embedded human stomach cancer tissue slide using 82957-2-RR (FDX1 antibody) at dilution of 1:400 (under 20x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH9).



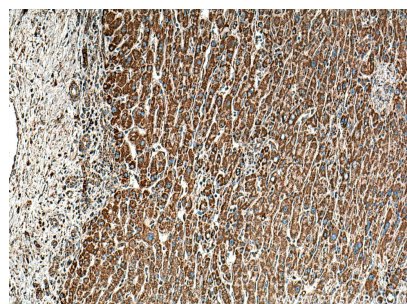
Immunohistochemical analysis of paraffin-embedded human stomach cancer tissue slide using 83654-3-RR (DLAT antibody) at dilution of 1:500 (under 20x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH9).



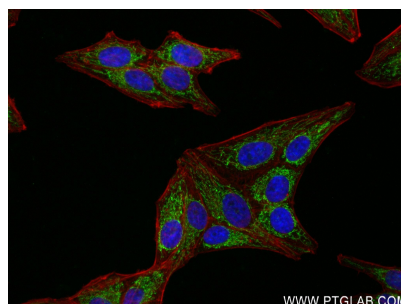
Immunohistochemical analysis of paraffin-embedded mouse brain tissue slide using 67298-1-Ig (LIAS antibody) at dilution of 1:1000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



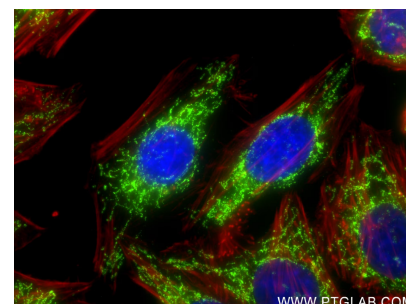
Immunohistochemical analysis of paraffin-embedded human liver cancer tissue slide using 67221-1-Ig (SLC31A1 antibody) at dilution of 1:2000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human liver cancer tissue slide using 67702-1-Ig (DLD antibody) at dilution of 1:500 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunofluorescent analysis of (4% PFA) fixed HepG2 cells using FDX1 antibody (82957-2-RR, Clone: 230196E9) at dilution of 1:400 and CoraLite®488-Conjugated Goat Anti-Rabbit IgG(H+L) (SA00013-2, CL594-Phalloidin (red).



Immunofluorescent analysis of (4% PFA) fixed HepG2 cells using DLAT antibody (83654-3-RR, Clone: 240713C12) at dilution of 1:250 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) (SA00013-2, CL594-Phalloidin (red).

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

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