For Research Use Only

Ferroptosis Essentials Antibody Kit

Catalog Number: PK30002

www.ptglab.com

Product Information

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

Kit Components

The Ferroptosis Essentials Antibody Kit contains antibodies against 5 key protein targets playing critical roles in the ferroptotic cell death pathway.

Antigen	Catalog No.	Host, clonality	Tested Reactivity	Applications	Volume
GPX4	67763-1-Ig	Mouse monoclonal	H, M, R, Rb, Pg, Dg, Hm, C, Z	WB, IHC, IF, ELISA	20 uL
SLC7A11/xCT	26864-1-AP	Rabbit polyclonal	H	WB, IP, IHC, ELISA	20 uL
KEAP1	80744-1-RR	Rabbit monoclonal	H, M, R	WB, IHC, IF, ELISA	20 uL
NRF2	80593-1-RR	Rabbit monoclonal	H	WB, IHC, IF/ICC, FC (Intra), IP, ELISA	20 uL
ACSL4	22401-1-AP	Rabbit polyclonal	H, M	WB, IP, IHC, ELISA	20 uL

Also see our 'Ferroptosis Expanded Antibody Kit' on the following page
https://www.ptglab.com/products/Ferroptosis-Expanded-Antibody-Kit-PK30003.htm

Package

5× 20 uL

Storage

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

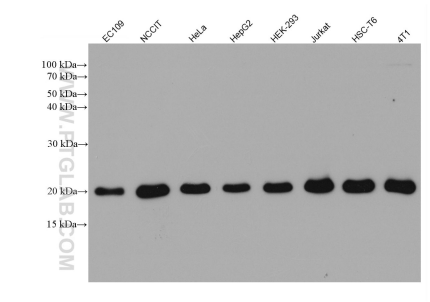
Background Information

Ferroptosis is an iron-dependent form of regulated cell death characterized by an increase in intracellular reactive oxygen species (ROS) levels. The peroxidase GPX4, whose activity relies on glutathione (GSH) biosynthesis, is a key regulator of the ferroptosis pathway. GPX4 utilizes GSH as a cofactor to reduce intracellular lipid peroxides. Inactivation of GPX4 caused by intracellular GSH depletion leads to ROS accumulation, thereby triggering ferroptosis. Ferroptosis can also be regulated by the cell surface cysteine-glutamate antiporter (system xc-) consisting of SLC7A11 and SLC3A2 in conjunction with the glutathione metabolic pathway. Inhibition of system xc- prevents glutathione synthesis by inhibiting cysteine absorption, leading to oxidative stress and impairment of GPX4 activity, which in turn promotes ferroptosis. The KEAP1-NRF2 pathway has been shown to play a protective role against ferroptosis in multiple disease models. ACSL4, an enzyme mediating fatty acid metabolism acts as a key driver and biomarker of ferroptosis under specific conditions.

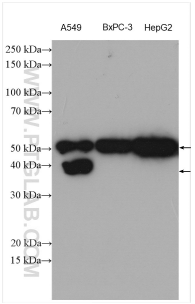
Standard Protocols

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

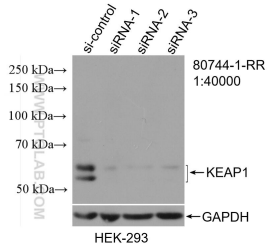
Validation Data



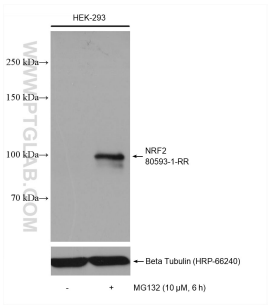
Various lysates were subjected to SDS PAGE followed by western blot with 67763-1-Ig (GPX4 antibody) at dilution of 1:5000 incubated at room temperature for 1.5 hours.



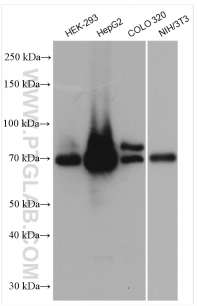
Various lysates were subjected to SDS PAGE followed by western blot with 26864-1-AP (SLC7A11/xCT antibody) at dilution of 1:1000 incubated at room temperature for 1.5 hours.



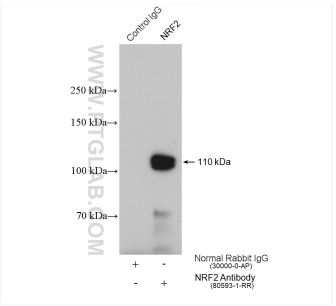
WB result of KEAP1 antibody (80744-1-RR; 1:40000; incubated at room temperature for 1.5 hours) with sh-Control and sh-KEAP1 transfected HEK-293 cells.



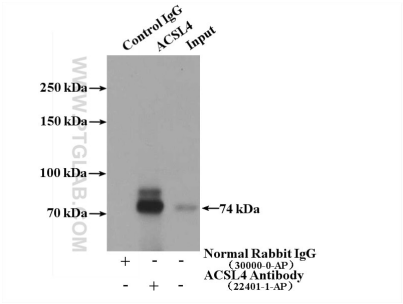
Non-treated and MG 132 treated HEK-293 cells were subjected to SDS PAGE followed by western blot with 80593-1-RR (NRF2, NFE2L2 antibody) at dilution of 1:2500 incubated at room temperature for 1.5 hours.



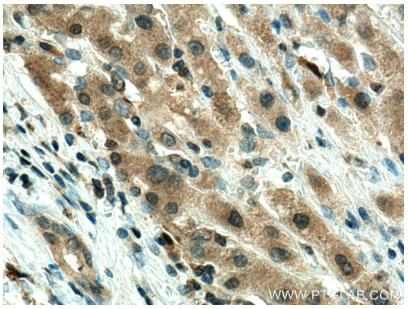
Various lysates were subjected to SDS PAGE followed by western blot with 22401-1-AP (ACSL4 antibody) at dilution of 1:6000 incubated at room temperature for 1.5 hours.



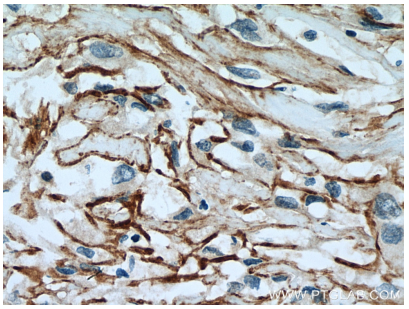
IP result of anti-NRF2, NFE2L2(IP:80593-1-RR, 4ug; Detection:80593-1-RR 1:800) with HeLa cells lysate 2520 ug.



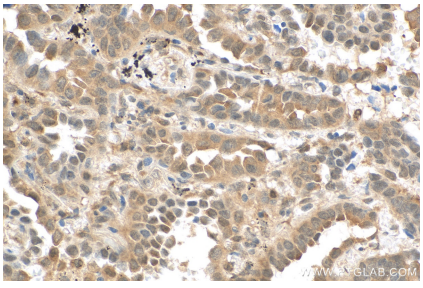
IP Result of anti-ACSL4/FACL4 (IP:22401-1-AP, 4ug; Detection:22401-1-AP 1:1000) with COLO 320 cells lysate 2000ug.



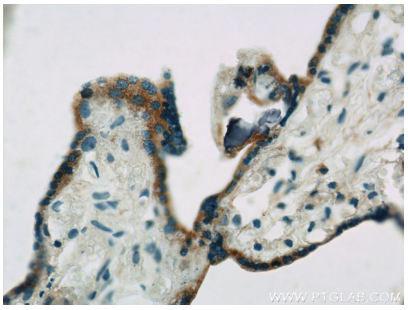
Immunohistochemical analysis of paraffin-embedded human liver cancer tissue slide using 67763-1-Ig (GPX4 antibody) at dilution of 1:2000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



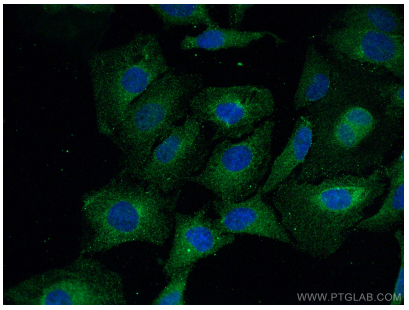
Immunohistochemical analysis of paraffin-embedded human renal cell carcinoma tissue slide using 26864-1-AP (SLC7A11/xCT antibody) at dilution of 1:200 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human lung cancer tissue slide using 80744-1-RR (KEAP1 antibody) at dilution of 1:1000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human placenta slide using 22401-1-AP (ACSL4 antibody at dilution of 1:50.



Immunofluorescent analysis of (4% PFA) fixed HeLa cells using GPX4 antibody (67763-1-Ig, Clone: 3F5G5) at dilution of 1:800 and CoraLite®488-Conjugated AffiniPure Goat Anti-Mouse IgG(H+L).

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

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