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KD-Validated Anti-FBXO22 Mouse Monoclonal Antibody

Mouse monoclonal antibody
Catalog # AGI2045

Specification

KD-Validated Anti-FBXO22 Mouse Monoclonal Antibody - Product Information

Application	**WB, FC**
Primary Accession	Q8NEZ5
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Mouse IgG1**
Calculated MW	**Predicted, 45 kDa, observed, 45 kDa KDa**
Gene Name	**FBXO22**
Aliases	**FBXO22; F-Box Protein 22; FBX22; F-Box Only Protein 22; FISTC1; FIST Domain Containing 1; F-Box Protein FBX22p44**
Immunogen	**Recombinant protein of human FBXO22**

KD-Validated Anti-FBXO22 Mouse Monoclonal Antibody - Additional Information

Gene ID **26263**

Other Names
F-box only protein 22, F-box protein FBX22p44, FBXO22, FBX22

KD-Validated Anti-FBXO22 Mouse Monoclonal Antibody - Protein Information

Name FBXO22

Synonyms FBX22

Function
Substrate-recognition component of the SCF (SKP1-CUL1-F-box protein)-type E3 ubiquitin ligase complex that is implicated in the control of various cellular processes such as cell cycle control, transcriptional regulation, DNA damage repair, and apoptosis. Promotes the proteasome-dependent degradation of key sarcomeric proteins, such as alpha-actinin (ACTN2) and filamin-C (FLNC), essential for maintenance of normal contractile function. Acts as a key regulator of histone methylation marks namely H3K9 and H3K36 methylation through the regulation of histone demethylase KDM4A protein levels (PubMed:21768309). In complex with KDM4A, also regulates the abundance of TP53 by targeting methylated TP53 for degradation at the late senescent stage (PubMed:26868148). Under oxidative stress, promotes the ubiquitination and degradation of BACH1. Mechanistically, reactive oxygen species (ROS) covalently modify cysteine residues on the bZIP domain of BACH1, leading to its release from chromatin and making it accessible to FBXO22 (PubMed:39504958). Upon amino acid depletion, mediates 'Lys-27'-linked ubiquitination of MTOR and thereby inhibits substrate recruitment to mTORC1 (PubMed:37979583). Also inhibits

SARS- CoV-2 replication by inducing NSP5 degradation (PubMed:39223933).

Cellular Location
Cytoplasm. Nucleus. Cytoplasm, myofibril, sarcomere, Z line. Note=Amino acid depletion lead to a time-dependent increase of FBXO22 in the cytoplasm.

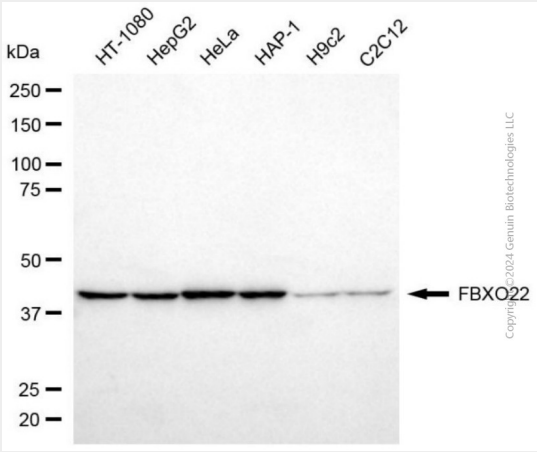
Tissue Location
Predominantly expressed in liver, also enriched in cardiac muscle.

KD-Validated Anti-FBXO22 Mouse Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KD-Validated Anti-FBXO22 Mouse Monoclonal Antibody - Images



Western blotting analysis using anti-FBXO22 antibody (Cat#AGI2045). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-FBXO22 antibody (Cat#AGI2045, 1:2,500) and HRP-conjugated goat anti-mouse secondary antibody respectively.

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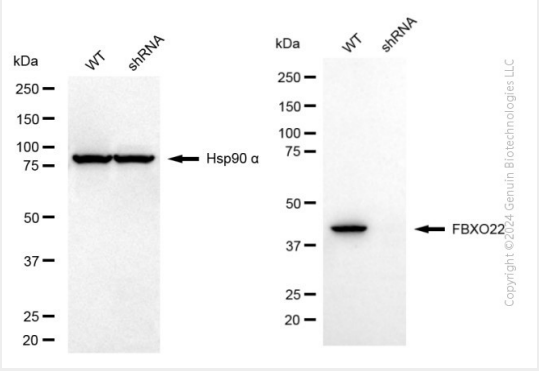
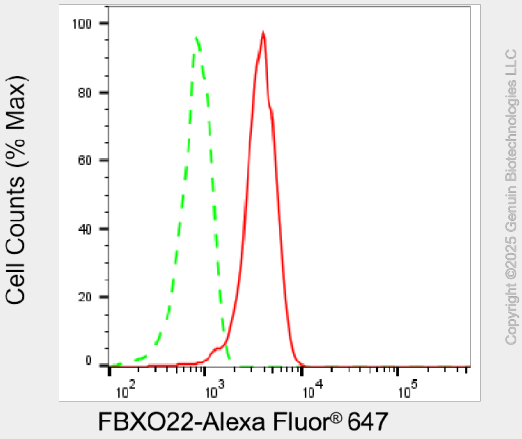


Western blotting analysis using anti-FBXO22 antibody (Cat#AGI2045). FBXO22 expression in wild type (WT) and FBXO22 shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-FBXO22 antibody (Cat#AGI2045, 1:2,500) and HRP-conjugated goat anti-mouse secondary antibody respectively.



Flow cytometric analysis of FBXO22 expression in HeLa cells using anti-FBXO22 antibody (Cat#AGI2045, 1:1,000). Green, isotype control; red, FBXO22.