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KD-Validated Anti-SMURF2 Mouse Monoclonal Antibody

Mouse monoclonal antibody
Catalog # AGI2000

Product Information

Application	WB
Primary Accession	Q9HAU4
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Mouse IgG1 kappa
Clone Names	24GB7225
Calculated MW	86196
Gene Name	SMURF2
Aliases	SMURF2; SMAD Specific E3 Ubiquitin Protein Ligase 2; HECT-Type E3 Ubiquitin Transferase SMURF2; SMAD Ubiquitination Regulatory Factor 2; E3 Ubiquitin-Protein Ligase SMURF2; HSMURF2; SMAD-Specific E3 Ubiquitin-Protein Ligase 2; E3 Ubiquitin Ligase SMURF2; EC 2.3.2.26; EC 6.3.2
Immunogen	Recombinant protein of human Smurf2

Additional Information

Gene ID	64750
Other Names	E3 ubiquitin-protein ligase SMURF2, hSMURF2, 2.3.2.26, HECT-type E3 ubiquitin transferase SMURF2, SMAD ubiquitination regulatory factor 2, SMAD-specific E3 ubiquitin-protein ligase 2, SMURF2 (HGNC:16809)

Protein Information

Name SMURF2 (HGNC:16809)

Function E3 ubiquitin-protein ligase which accepts ubiquitin from an E2 ubiquitin-conjugating enzyme in the form of a thioester and then directly transfers the ubiquitin to targeted substrates (PubMed:11016919, PubMed:38016474). Interacts with SMAD7 to trigger SMAD7-mediated transforming growth factor beta/TGF-beta receptor ubiquitin-dependent degradation, thereby down-regulating TGF-beta signaling (PubMed:11163210, PubMed:12717440, PubMed:21791611). In addition, interaction with SMAD7 activates autocatalytic degradation, which is prevented by interaction with AIMP1 (PubMed:18448069). Also forms a stable complex with TGF-beta receptor-mediated phosphorylated SMAD1, SMAD2 and SMAD3, and targets SMAD1 and SMAD2 for ubiquitination and proteasome-mediated degradation (PubMed:11016919, PubMed:11158580, PubMed:11389444). SMAD2 may recruit substrates, such as SNON, for ubiquitin-dependent degradation (PubMed:11389444). Negatively regulates TGFB1-induced epithelial-mesenchymal transition and myofibroblast differentiation (PubMed:30696809). Acts as an activator of ferroptosis by mediating

	ubiquitination and degradation of GSTP1, thereby preventing detoxification of 4-hydroxynonenal (4-HNE) reactive aldehyde (PubMed:38016474). Acts as a positive regulator of smoothened signaling pathway by mediating ubiquitination of PTCH1, leading to endocytosis and lysosomal degradation of PTCH1 (By similarity).
Cellular Location	Nucleus. Cytoplasm. Cell membrane. Membrane raft. Note=Cytoplasmic in the presence of SMAD7. Colocalizes with CAV1, SMAD7 and TGF-beta receptor in membrane rafts
Tissue Location	Widely expressed.

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