

IHC*easy* SMAD2 Ready-To-Use IHC Kit

Catalog Number: **KHC0126**

General Information

Sample type:
FFPE tissue

Cited sample type:

Reactivity:
Human, Mouse, Rat

Cited Reactivity:

Assay type:
Immunohistochemistry

Primary antibody type:
Mouse Monoclonal

Secondary antibody type:
Polymer-HRP-Goat anti-Mouse

Kit Component

| Component | Size | Concentration |
|--------------------------|--------------------|---------------|
| Antigen Retrieval Buffer | 100 mL | 50× |
| Washing Buffer | 100 mL ×2 | 20× |
| Blocking Buffer | 5 mL | RTU |
| Primary Antibody | 5 mL | RTU |
| Secondary Antibody | 5 mL | RTU |
| Chromogen Component A | 0.2 mL | RTU |
| Chromogen Component B | 4 mL | RTU |
| Signal Enhancer | 5 mL | RTU |
| Counter Staining Reagent | 5 mL | RTU |
| Mounting Media | 5 mL | RTU |
| Control Slide | 1 slide (Optional) | FFPE |
| Datasheet | 1 Copy | |
| Manual | 1 Copy | |

Storage Instructions

All the reagents are stored at 2-8°C. The kit is stable for 6 months from the date of receipt.

Background

SMAD2, also named as MADH2 and MADR2, belongs to the dwarfin/SMAD family, contains 1 MH1 (MAD homology 1) domain and 1 MH2 (MAD homology 2) domain. SMAD2 is a receptor-regulated SMAD (R-SMAD) that is an intracellular signal transducer and transcriptional modulator activated by TGF-beta and activin type 1 receptor kinases. This protein may act as a tumor suppressor in colorectal carcinoma. It is phosphorylated on one or several of Thr-220, Ser-245, Ser-250, and Ser-255. In response to TGF-beta, it is phosphorylated on Ser-465/467 by TGF-beta and activin type 1 receptor kinases, and then able to interact with SMURF2, recruiting other proteins, such as SNON, for degradation. In response to decorin, the naturally occurring inhibitor of TGF-beta signaling, it is phosphorylated on Ser-240 by CaMK2. It is phosphorylated by MAPK3 upon EGF stimulation; which increases transcriptional activity and stability, and is blocked by calmodulin. In response to TGF-beta, it is ubiquitinated by NEDD4L, which promotes its degradation. In response to TGF-beta signaling, it is acetylated on Lys-19 by coactivators, which increases transcriptional activity.

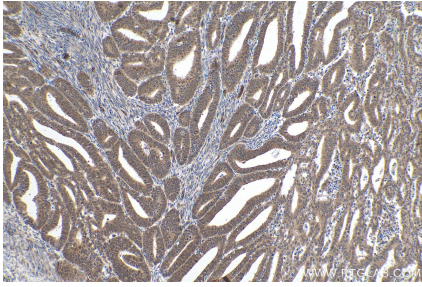
Synonyms

hMAD 2, hSMAD2, JV18, JV18 1, MAD homolog 2, Mad related protein 2, MADH2, MADR2, Mothers against DPP homolog 2, SMAD 2, SMAD family member 2, SMAD2

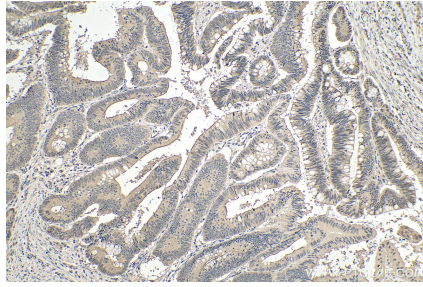
For technical support and original validation data for this product please contact:
T: 1 (888) 4PTGLAB (1-888-478-4522) (toll free in USA), or 1(312) 455-8498 (outside USA)
E: proteintech@ptglab.com
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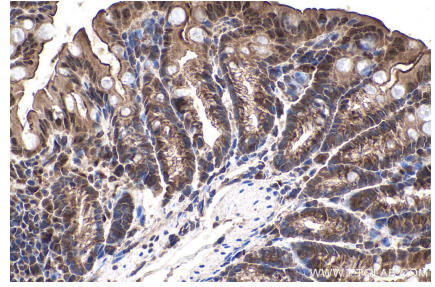
Selected Validation Data



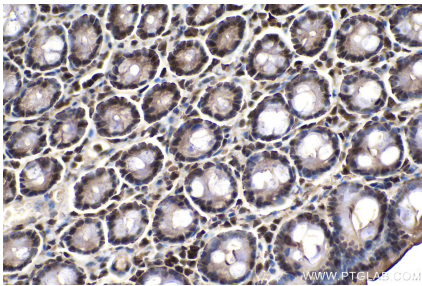
Immunohistochemical analysis of paraffin-embedded human endometrial cancer tissue slide using KHC0126 (SMAD2 IHC Kit).



Immunohistochemical analysis of paraffin-embedded human colon cancer tissue slide using KHC0126 (SMAD2 IHC Kit).



Immunohistochemical analysis of paraffin-embedded mouse colon tissue slide using KHC0126 (SMAD2 IHC Kit).



Immunohistochemical analysis of paraffin-embedded rat colon tissue slide using KHC0126 (SMAD2 IHC Kit).