

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

Catalog Number: **KHC0126**

## General Information

<b>Sample type:</b> FFPE tissue	<b>Assay type:</b> Immunohistochemistry
<b>Cited sample type:</b>	<b>Primary antibody type:</b> Mouse Monoclonal
<b>Reactivity:</b> Human, Mouse, Rat	<b>Secondary antibody type:</b> Polymer-HRP-Goat anti-Mouse
<b>Cited Reactivity:</b>	

## 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.

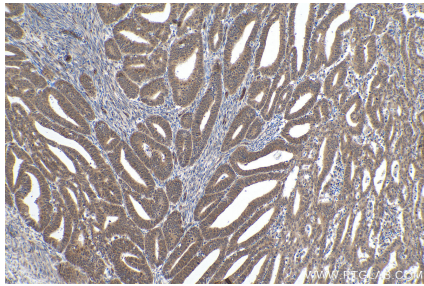
## Background

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.

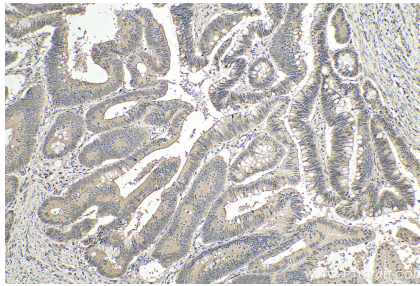
## Synonyms

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

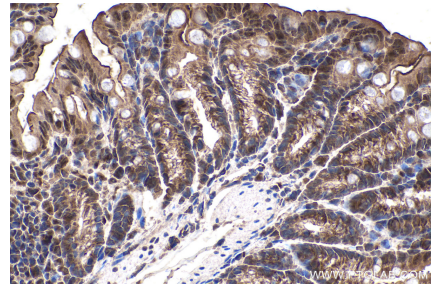
## Selected Validation Data



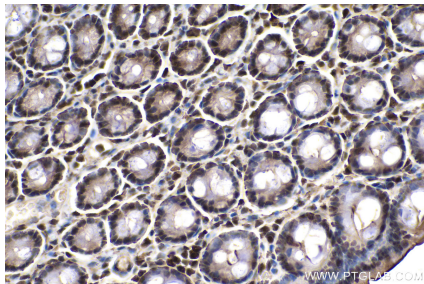
Immunohistochemical analysis of paraffin-embedded human endometrial cancer tissue slide using KHC0126 (SMAD2 IHC Kit).



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).