Qty: 100µg/400 µL

Rabbit anti-phospho-Smad2 (Ser465/Ser467)

Catalog No. 40-0800

Lot No.

Rabbit anti-phospho-Smad2 (Ser465/Ser467)

FORM
This polyclonal antibody is supplied as a 400 µL aliquot at a concentration of 0.25 mg/mL in phosphate buffered saline (pH 7.4) containing 0.1% sodium azide. This antibody is epitope-affinity purified from rabbit antiserum.

PAD: ZMD.425

IMMUNOGEN
Synthetic peptide encompassing the phosphorylated serine 465 and 467 residues of human, mouse, and rat Smad2

SPECIFICITY
This antibody detects the ~58 kDa Smad2 when dually phosphorylated at Ser465 and Ser467. While TGF-β-stimulated HEPG2 lysates yielded the target band in Western blotting, the unstimulated HEPG2 lysates did not show a signal.

REACTIVITY
Reactivity has been confirmed by Western blotting with TGF-β-stimulated HEPG2 human hepatocellular carcinoma lysates.

Sample	Western Blotting
Human	+++
Rat	ND
Mouse	ND

(Excellent +++, Good++, Poor +, No reactivity 0, Not applicable N/A, Not Determined ND)

USAGE
Working concentrations for specific applications should be determined by the investigator. Appropriate concentrations will be affected by several factors, including secondary antibody affinity, antigen concentration, sensitivity of detection method, temperature and length of incubations, etc. The suitability of this antibody for applications other than those listed below has not been determined. The following concentration ranges are recommended starting points for this product.

Western Blotting: 0.1-1 µg/mL

STORAGE
Store at 2-8°C for up to one month. Store at –20°C for long-term storage. Avoid repeated freezing and thawing.

(cont'd)

BACKGROUND

Smad proteins are intracellular signal transducers and downstream effectors of TGF-β/BMP signaling. Three distinct classes of Smads have been defined: the receptor-regulated (R-Smads), which include Smad1, 2, 3, 5, 8; the common-mediator Smads (co-Smads), including Smad4, and the antagonistic or inhibitory Smads (I-Smads), including Smad6 and 7.[1]

Smad2 is a ubiquitously expressed, 58 kDa protein that is phosphorylated and translocates to the nucleus in response to TGF-β stimulation. After activation of TGF-β receptors, Smad2 and Smad3 become phosphorylated and form heteromeric complexes with Smad4. Thereafter, these activated Smad complexes translocate to the nucleus, where they may direct transcriptional responses.[2] Phosphorylation of Smad2 on Ser465 and Ser467 is required for Smad2/Smad4 complex formation and TGF-β signaling.[3]

REFERENCES

1. Derynck R, et al. *Cell* 95:737-740, 1998.
2. Souchelnytskyi S, et al. *J Biol Chem* 272(44):28107-28115, 1997.
3. Abdollah S, et al. *J Biol Chem* 272:27678–27685, 1997.

RELATED PRODUCTS

Product	*Conjugate*	*Cat. No.*
Protein A	Sepharose® 4B	10-1041
rec-Protein G	Sepharose® 4B	10-1241

Conjugate	ZyMAX™ Goat x Rabbit IgG (H+L)	ZyMAX™ Goat x Mouse IgG (H+L)
Purified	81-6100	81-6500
FITC	81-6111	81-6511
TRITC	81-6114	81-6514
Cy™3	81-6115	81-6515
Cy™5	81-6116	81-6516
HRP	81-6120	81-6520
AP	81-6122	81-6522
Biotin	81-6140	81-6540

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