

## Product datasheet for **TA319191**

### SMAD3 Rabbit Polyclonal Antibody

#### Product data:

|                       |   |
|-----------------------|---|
| Product Type:         | Primary Antibodies  |
| Applications:         | IHC, WB   |
| Recommended Dilution: | ELISA: 1:75,000 - 1:300,000, WB: 1:2,000 - 1:20,000, IHC: 1:500   |
| Reactivity:           | Human, Zebrafish, Rat, Mouse, Bovine, Xenopus, X. tropicalis, Chicken, Pig  |
| Host:                 | Rabbit  |
| Isotype:              | IgG   |
| Clonality:            | Polyclonal  |
| Immunogen:            | This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to amino acids 417-425 of human SMAD3 protein. |
| Formulation:          | 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2  |
| Conjugation:          | Unconjugated  |
| Storage:              | Store at -20°C as received.   |
| Stability:            | Stable for 12 months from date of receipt.  |
| Gene Name:            | SMAD family member 3  |
| Database Link:        | <a href="#">NP_001138574</a><br><a href="#">Entrez Gene 17127 Mouse</a> <a href="#">Entrez Gene 25631 Rat</a> <a href="#">Entrez Gene 4088 Human</a><br><a href="#">P84022</a>                |
| Synonyms:             | HSPC193; HsT17436; JV15-2; LDS1C; LDS3; MADH3   |



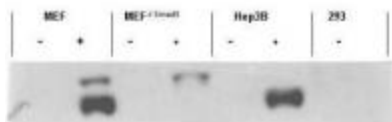
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**Note:** This antibody is suitable for Cancer, Immunology and Nuclear Signaling research. Smad3 (also known as Mothers against decapentaplegic homolog 3 Mothers against DPP homolog 3, Mad3, hMAD-3, JV15-2 or hSMAD3) is a transcriptional modulator activated by TGF-beta (transforming growth factor) and activin type 1 receptor kinase. These activators exert diverse effects on a wide array of cellular processes. The Smad proteins mediate much of the signaling responses induced by the TGF-b superfamily. Briefly, activated type I receptor phosphorylates receptor-activated Smads (R-Smads) at their c-terminal two extreme serines in the SSXS motif, e.g. Smad2 and Smad3 proteins in the TGF-b pathway, or Smad1, Smad5 or Smad8 in the BMP pathway. Then the phosphorylated R-Smad translocated into nucleus, where they regulate transcription of target genes. Based on microarray and animal model experiments, Smad3 accounts for at least 80% of all TGF-b-mediated response.

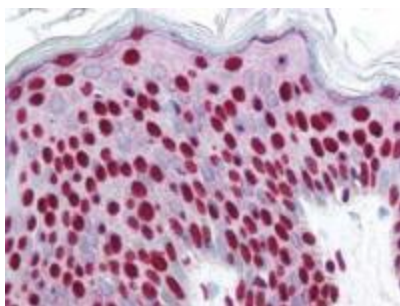
**Protein Families:** Cancer stem cells, Druggable Genome, Embryonic stem cells, ES Cell Differentiation/IPS, Stem cell relevant signaling - JAK/STAT signaling pathway, Stem cell relevant signaling - TGFb/BMP signaling pathway, Transcription Factors

**Protein Pathways:** Adherens junction, Cell cycle, Chronic myeloid leukemia, Colorectal cancer, Pancreatic cancer, Pathways in cancer, TGF-beta signaling pathway, Wnt signaling pathway

### Product images:



Western blot using affinity purified anti-Smad3 pS423 pS425 antibody shows detection of endogenous Smad3 in stimulated cell lysates. Lysates were prepared from control cells (- lanes), or cells stimulated with 2 ng/ml TGF (+lanes) for 1 hour. This reagent recognizes phosphorylated Smad3 and has negligible reactivity against non-phosphorylated Smad3 protein. Personal Communication. Ying Zhang, NIH, CCR, Bethesda, MD.



Anti-Smad3 pS423 pS425 antibody was used at 2.5 ug/ml to detect signal in a variety of tissues including multi-human, multi-brain and multi-cancer slides. This image shows strong nuclear staining in the majority of epidermal keratinocytes at 40X. Tissue was formalin-fixed and paraffin embedded. The image shows localization of the antibody as the precipitated red signal, with a hematoxylin purple nuclear counterstain. Personal Communication, Tina Roush, LifeSpanBiosciences, Seattle, WA.