

PATHWAY

TGF- β /Smad

热门信号通路产品

成都正能生物技术有限责任公司



PlatinumAb
精品抗体



RecRabs[®]
重组免单抗



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病理级抗体



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TGF-β/Smad 信号通路关键路径

TGF-β (Transforming growth factor β) 是一种具有多功能生物学活性的细胞因子，参与早期胚胎发育、创伤愈合、软骨和骨的形成、胞外基质的合成、炎症反应、间质纤维化及肿瘤的发生等过程。在调节细胞的生长、分化、凋亡、粘附和组织修复中起着重要作用。Smad 蛋白可以将 TGF-β 超家族信号由受体传递至细胞核内，进而控制特定基因的表达，还可以在其他转录因子共同作用下，特异性调控靶基因的转录。

在哺乳动物中，TGF-β 有 TGF-β1/2/3 三种亚型，并存在相应的三种受体 TGF-β Receptor I/II/III。TGF-β/Smad 通路可分为两条主要途径：TGF-β/Activin 途径与 BMP 途径，作为 TGF-β 受体激酶的唯一底物蛋白，Smad 家族蛋白在通路中一直作为信号转导分子的重要角色存在，根据其在通路中行使的功能可被划分为三类 (图 1)。

① 受体活化型 R-Smad :









Smad2 和 Smad3，主要参与 TGF-β/Activin 途径；Smad1/5/9，在 BMP 途径中被激活；

② 共同通路型 Co-Smad :

Smad4，TGF-β 家族各类信号转导过程中共同需要的介质；

③ 抑制型 I-Smad :

Smad6 和 Smad7 可与激活的 I 型受体结合，从而竞争性抑制 R-Smad 的磷酸化，导致信号通路被阻断。

| TGF-β/Smad 通路 · 相关靶标 | |  |  |  |  |
|---|---------|---|---|--|---|
| 靶标 | 产品货号 | 产品名称 | 反应种属 | 应用 | |
| ACVR1 | R389379 | ACVR1 Rabbit mAb | Human,Mouse,Rat | WB,IP | |
| TGFBI | R380652 | TGFBI Rabbit mAb | Human,Mouse,Rat | WB,IHC-P,ICC/IF | |
| BMP4 | R380818 | BMP4 Rabbit mAb | Human | WB,IHC-P,ICC/IF,IP,FC | |
| BMP6 | R383181 | BMP6 Rabbit mAb | Human,Mouse,Rat | WB,IHC-P,ICC/IF,FC | |
| BMP7 | R381724 | BMP7 Rabbit mAb | Human,Mouse,Rat | WB,IP | |
| Endoglin | R26532 | CD105 Rabbit mAb | Human | WB,IHC-P,IP | |
| Gremlin | 120721 | Gremlin 1 Rabbit pAb | Mouse | WB | |
| PINCH | 220595 | PINCH (3C12) Mouse mAb | Human | WB,ICC/IF,FC,IP | |
| | 122620 | PINCH Rabbit pAb | Human,Mouse | WB,IHC-P | |
| Mic-1 | R24424 | GDF15 Rabbit mAb | Human | WB | |
| MIS-R2 | R38911 | AMHR2 Rabbit mAb | Human,Mouse | WB | |
| SARA | R27258 | SARA Rabbit mAb | Human | WB,IHC-P,IP | |
|  Smad1 | R380908 | Smad1 Rabbit mAb | Human,Mouse | WB,ICC/IF | |
| | 617579 | Smad1 Rabbit pAb | Human,Mouse,Rat | WB,IHC-P,ICC/IF | |
| | R26360 | Phospho-Smad1 (Ser463/Ser465) Rabbit mAb | Human,Rat | WB,IP | |
|  Smad2 | 382472 | Smad2/3 Rabbit pAb | Human,Rat | WB,ICC/IF,FC,IP,ChIP | |
| | R25742 | Smad2 Rabbit mAb | Human,Rat,Hamster | WB,IHC-F,IHC-P,ICC/IF,IP | |
| | 200790 | Smad2 (6H5) Mouse mAb | Human,Mouse | WB,ICC/IF | |
| | R22952 | Phospho-Smad2 (Ser255) Rabbit mAb | Human | WB,IHC-P,IP | |
|  Smad3 | 347523 | Acetyl-Smad2/3 (Lys19) Rabbit pAb | Human,Mouse,Rat | IHC-P,WB | |
| | R22774 | Smad3 Rabbit mAb | Human,Rat | WB,IHC-F,IHC-P,ICC/IF | |
| | R22919 | Phospho-Smad3 (Ser423/425) Rabbit mAb | Human,Rat,Hamster | WB | |
| Smad4 | 220461 | Smad4 Mouse mAb | Human,Mouse | WB,IHC-P,ICC/IF,FC | |
| | R27290 | Smad4 Rabbit mAb | Human,Rat | WB,ICC/IF,IP | |
| Smad5 | 200357 | Smad5 (4B10) Mouse mAb | Human | WB,ICC/IF,FC | |
| | R25745 | Smad5 Rabbit mAb | Human,Rat | WB,IHC-F,IHC-P,ICC/IF | |
| | R380758 | Phospho-Smad5 (Ser463/465) Rabbit mAb | Human,Mouse,Rat | WB,IHC-P,ICC/IF | |
| Smad6 | 220465 | Smad6 Mouse mAb | Human | WB | |
|  Smad7 | 860746 | Smad7 Rabbit pAb | Human,Mouse,Rat | WB,IHC-P | |
| Smad9 | 161453 | Smad9 Rabbit pAb | Human,Mouse | WB,IHC-P | |

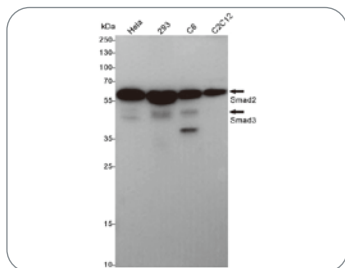
TGF-β/Smad 通路 · 相关靶标



| 靶标 | 产品货号 | 产品名称 | 反应种属 | 应用 |
|--------|---------|---------------------------------|-------------------|---------------------------------|
| Smurf1 | 860909 | SMURF1 Rabbit pAb | Human, Mouse | IHC-P |
| Smurf2 | R382217 | SMURF2 Rabbit mAb | Human, Mouse, Rat | WB |
| SnoN | 823196 | SKIL Rabbit pAb | Human, Mouse | WB, IHC-P |
| TGF-α | R25895 | TGF alpha Rabbit mAb | Human | WB, IHC-P, IP |
| TGF-β | R22797 | TGF beta 1 Rabbit mAb | Human, Mouse, Rat | WB |
| | 346599 | TGF beta 1 Rabbit pAb | Human, Mouse, Rat | WB, IHC-F, IHC-P, ICC/IF, ELISA |
| | 346596 | TGF beta Receptor II Rabbit pAb | Human, Mouse, Rat | ICC/IF, WB, IHC-F, IHC-P, ELISA |
| | 221040 | TGF beta Receptor III Mouse mAb | Human, Mouse | WB |

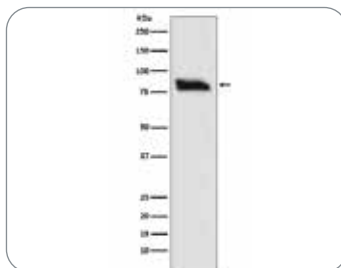
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#382472
Smad2/3 Rabbit pAb



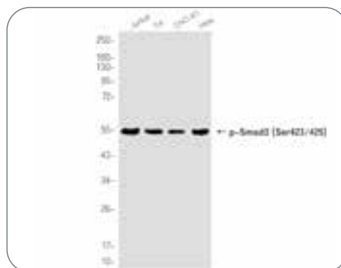
Western blot analysis of Smad2/3 in HeLa, 293, C6, C2C12 lysates using Smad2/3 antibody.

#R382217
SMURF2 Rabbit mAb



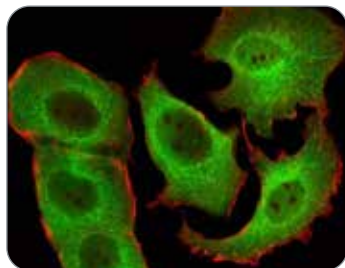
Western blot analysis of SMURF2 in SH-SY5Y lysates using SMURF2 antibody.

#R22919
Phospho-Smad3 (Ser423/425) Rabbit mAb



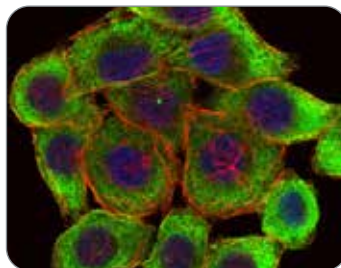
Western blot analysis of Phospho-Smad3 (Ser423/425) in Jurkat, C6, CHO-K1, HeLa lysates using Phospho-Smad3 (Ser423/425) antibody.

#617579
Smad1 Rabbit pAb



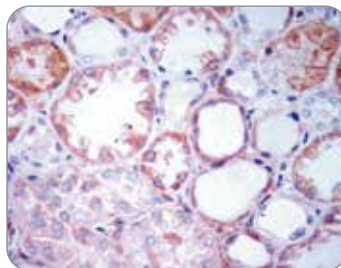
Immunofluorescence analysis of Smad1 in MCF-7 cells using SMAD1 antibody (green) and DAPI (blue).

#220595
PINCH (3C12) Mouse mAb



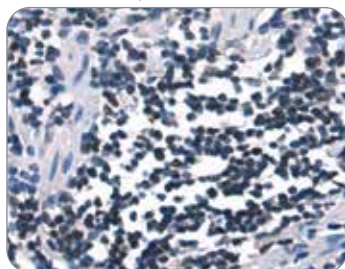
Immunofluorescence analysis of PINCH (3C12) in HepG2 cells using PINCH (3C12) antibody (green) and DAPI (blue).

#R380652
TGFBI Rabbit mAb



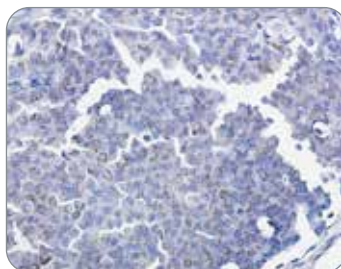
Immunohistochemistry analysis of paraffin-embedded Human kidney using TGFBI antibody. High-pressure and temperature Sodium Citrate pH 6.0 was used for antigen retrieval.

#860746
Smad7 Rabbit pAb



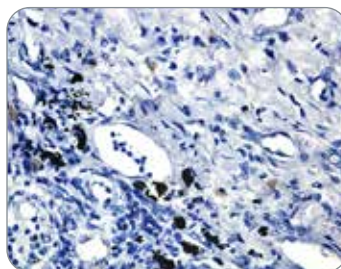
Immunohistochemistry analysis of paraffin-embedded Human cervical cancer using Smad7 antibody. High-pressure and temperature Sodium Citrate pH 6.0 was used for antigen retrieval.

#R22774
Smad3 Rabbit mAb



Immunohistochemistry analysis of paraffin-embedded Human breast cancer tissue using Smad3 antibody. High-pressure and temperature Sodium Citrate pH 6.0 was used for antigen retrieval.

#R25742
Smad2 Rabbit mAb



Immunohistochemistry analysis of paraffin-embedded Human lung cancer using Smad2 antibody. High-pressure and temperature Sodium Citrate pH 6.0 was used for antigen retrieval.

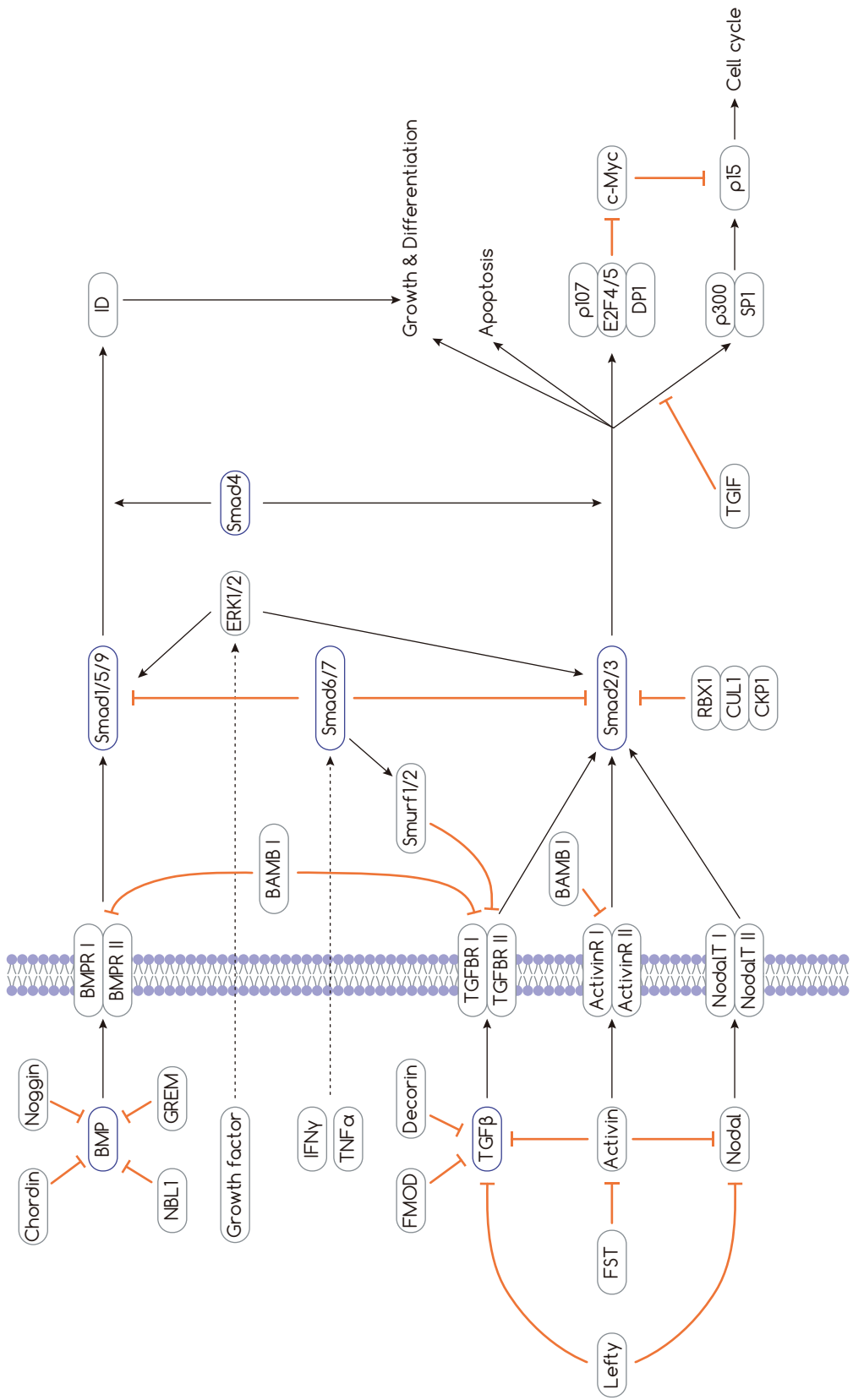


图1：TGF-β/Smad 信号通路