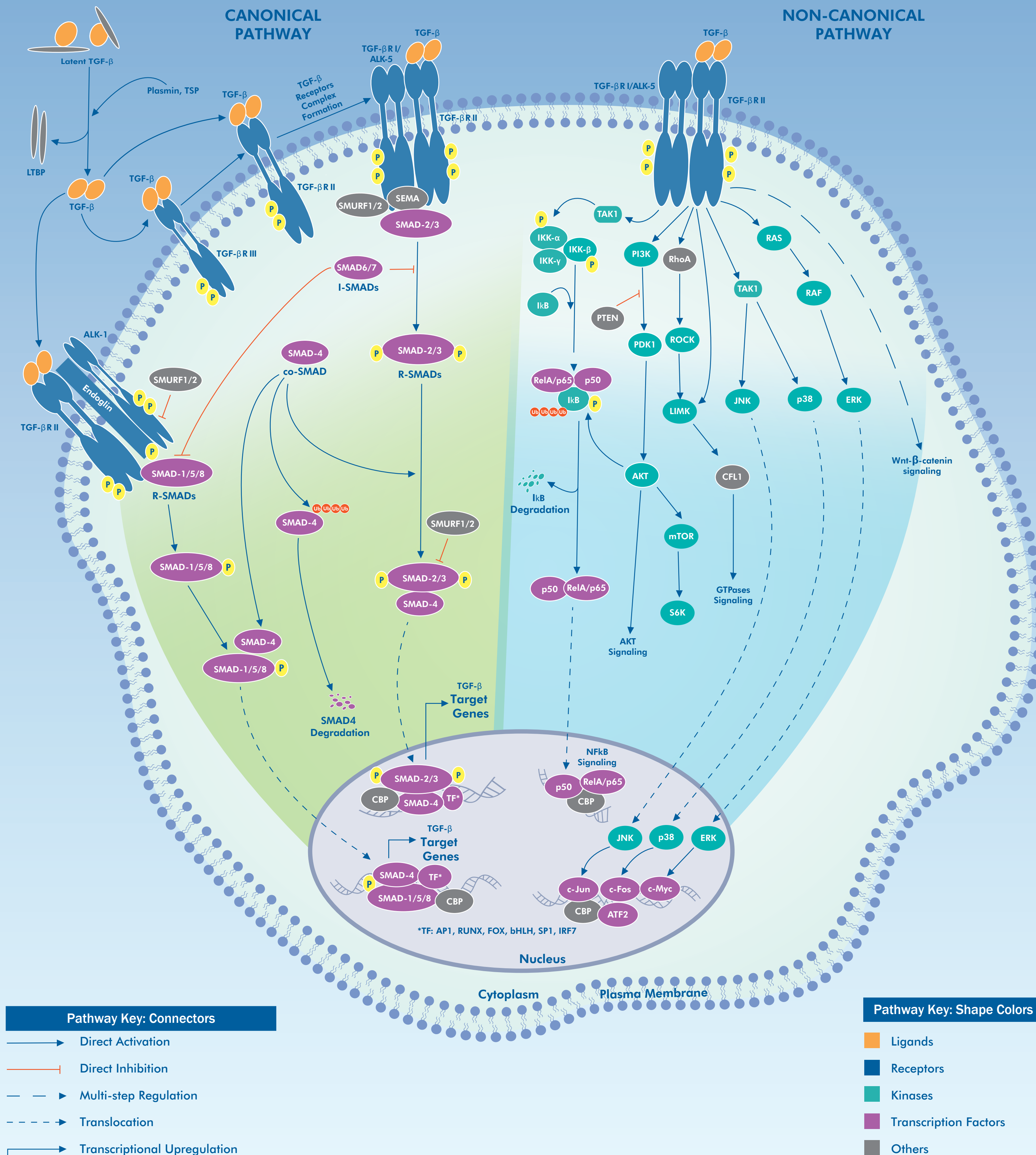
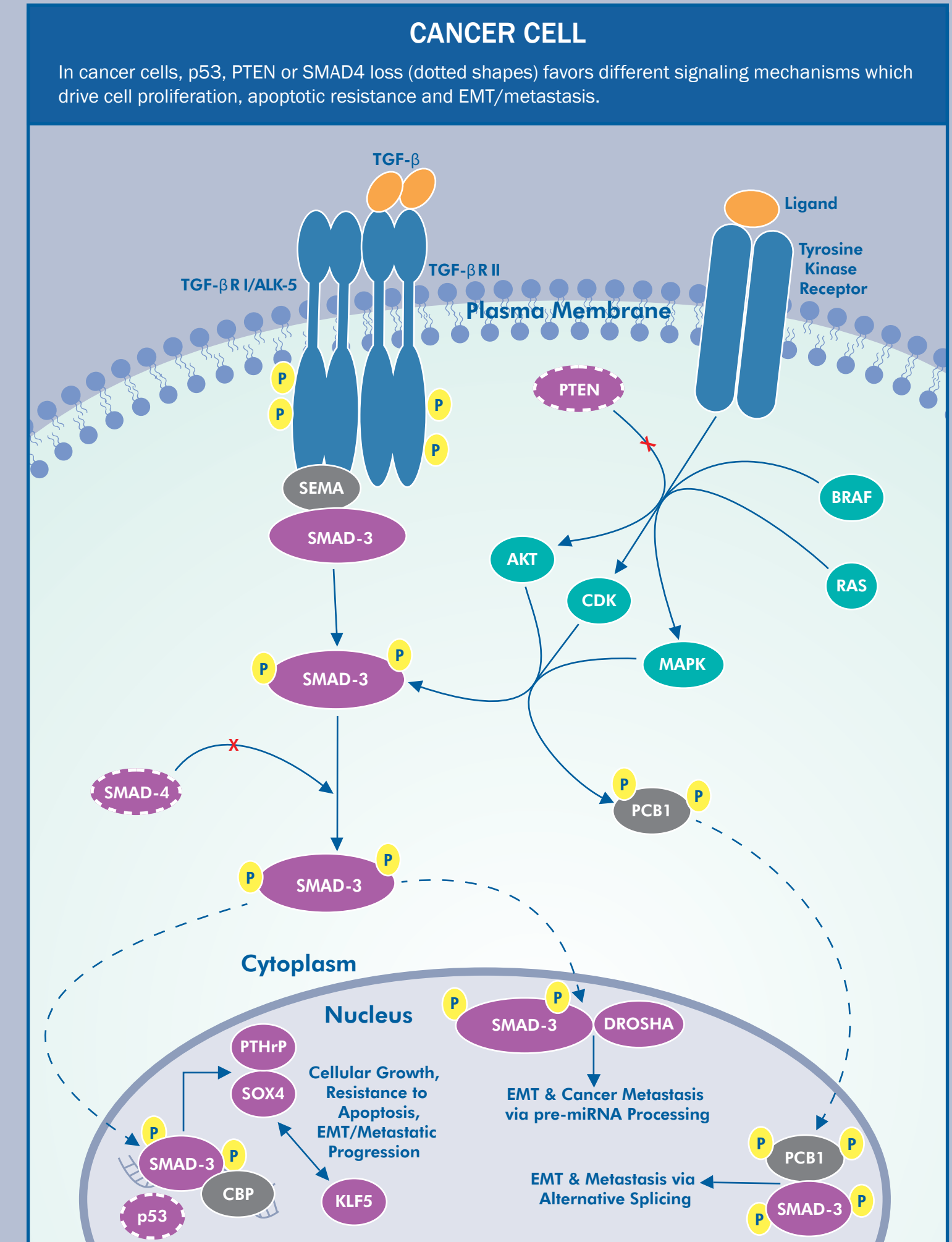
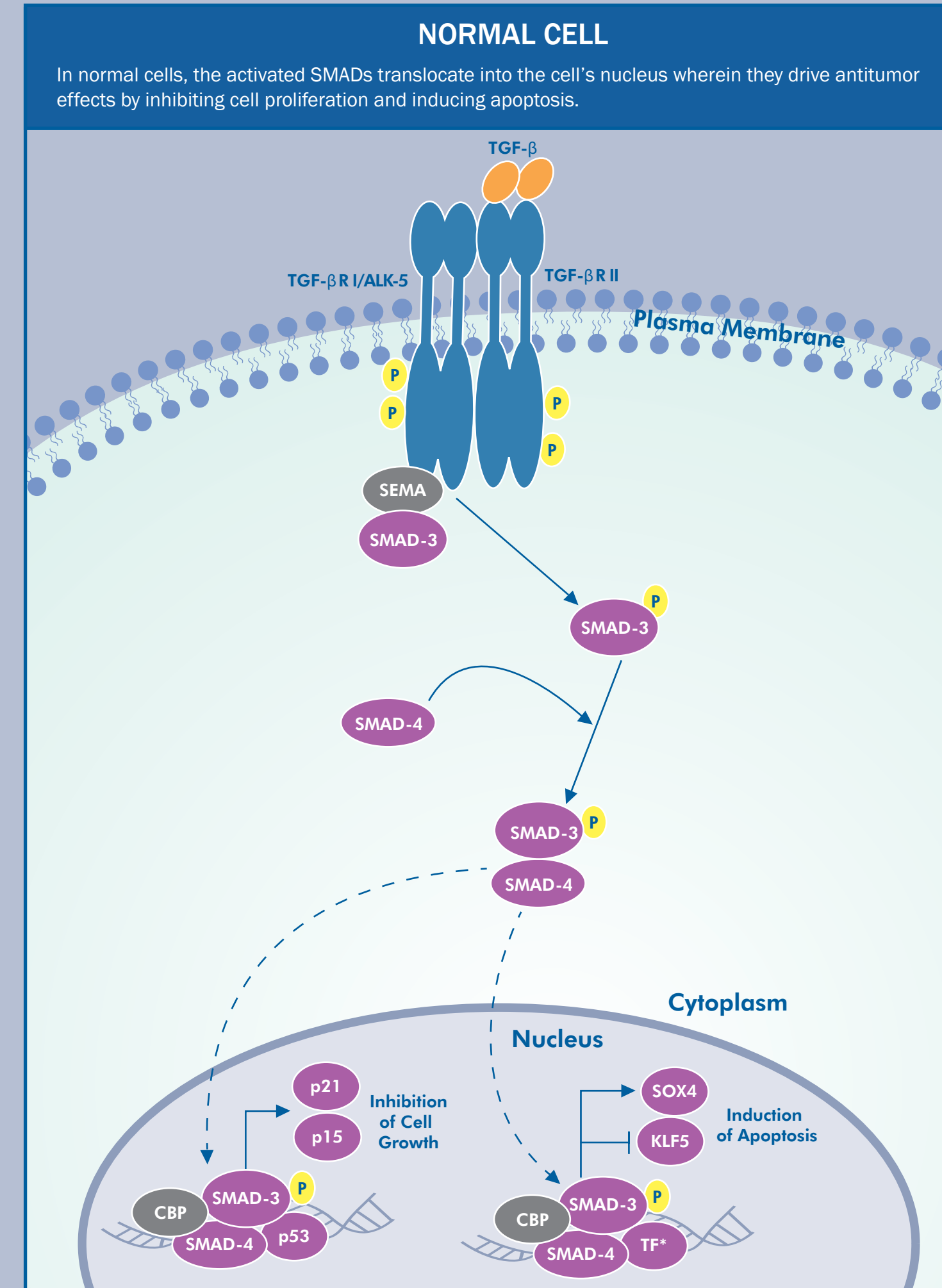


# TGF-β Signaling



Differential / Context Dependent TGF-β - SMADs Signaling in Normal and Cancer Cells



Target Genes of TGF-β Signaling

| Processes                             | Target Genes   |
|---------------------------------------|--|
| Angiogenesis                          | CTGF, FN1, ID1, IL6, MMP2, MMP9, SERPINE1/PAI1, TSP, VEGFA   |
| Apoptosis                             | BCL2, BCL2L1/BCL-XL, BIK, BCL2L11/BIM, EIF2A, FAS, ERN1, EIF2AK3/PERK, MAPK8/JNK, SNAI1/Snail, SOX4    |
| Autophagy                             | AMPK, AKT, ATG5, ATG7, BECN1, DAPK1, mTOR, TAB1, TAK1  |
| Cell Proliferation                    | 4EBP1/EIF4EBP1, AKAP12, ID1, ID2, MYC, p15/INK4B/CDKN2B, p21/CIP1/CDKN1A, p57/KIP2/CDKN1C, PDGFB, PI3K |
| Epithelial to Mesenchymal Transition  | ACTN1, CFL1/CFL, COL4A1, HMGCA, MMP2, MMP9, NET1, SNAI1/Snail, SNAI2/Slug, TWIST, ZEB1, ZEB2           |
| Extra-Cellular Matrix (ECM) Synthesis | ACTA2/α-SMA, COL1A1, COL4A1, CTGF, FN1, LAMC2, SPOK1   |
| Immune Response                       | FASL, FOXP3, GZMA, GZMB, IFNG/IFG, IgA, IL11, IL17, IL2, IL6, KLRK1/NKG2D, PRF1, TNFA                  |
| Self-Renewal/Stemness                 | CTNNB1, HGF, KLF4, LIF, MET, NANOG, SOX2, SOX4, WNT5A  |

Small Molecule Inhibitors of TGF-β Signaling

| Small Molecule | Description   |
|----------------|---|
| LY 364947      | Selective inhibitor of TGF-βRI                        |
| SB 525334      | Selective inhibitor of TGF-βRI                        |
| SB 505124      | Selective inhibitor of TGF-βRI, ALK4 and ALK7         |
| GW 788388      | Potent and selective inhibitor of TGF-βRI             |
| SD 208         | Potent ATP-competitive TGF-βRI inhibitor              |
| R 268712       | Potent and selective inhibitor of TGF-βRI             |
| IN 1130        | Potent and selective inhibitor of TGF-βRI             |
| SB 431542      | Potent, selective inhibitor of TGF-βRI, ALK4 and ALK7 |
| A 83-01        | Selective inhibitor of TGF-βRI, ALK4 and ALK7         |
| RepSox         | Potent and selective inhibitor of TGF-βRI             |
| ITD 1          | Selective inhibitor of TGF-β signaling                |
| SIS3           | Selective Smad3 inhibitor; inhibits TGF-βRI signaling |

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