Supplemental Data

Figure S1 Sequence alignment of three pro-TGF-β isoforms

Sequences of TGF-βs 1-3 are aligned (Roberts and Sporn 1990). Signal peptide portion

is highlightened in light yellow. LAP portion is highlightened in light blue. Active

TGF-β portion is highlightened in magenta. Asterisks indicate same amino acids among

three isoforms. PLK cleavage site (R^{58}-L^{59}) is indicated by a red arrow. Synthetic

peptides, having the sequences from I^{36} to S^{64} (TGF-β1), L^{27} to E^{55} (TGF-β2), L^{30} to E^{58}

(TGF-β3) surrounded by a rectangle, were made for checking isoform-specificity of

R58 antibody.

Supplemental Reference

Roberts AB, Sporn MB. (1990) The Transforming Growth Factor-βs, in Peptide Growth

Factors and Their Receptors I. Sporn MB, Roberts AB (eds) Springer-Verlag. Berlin,
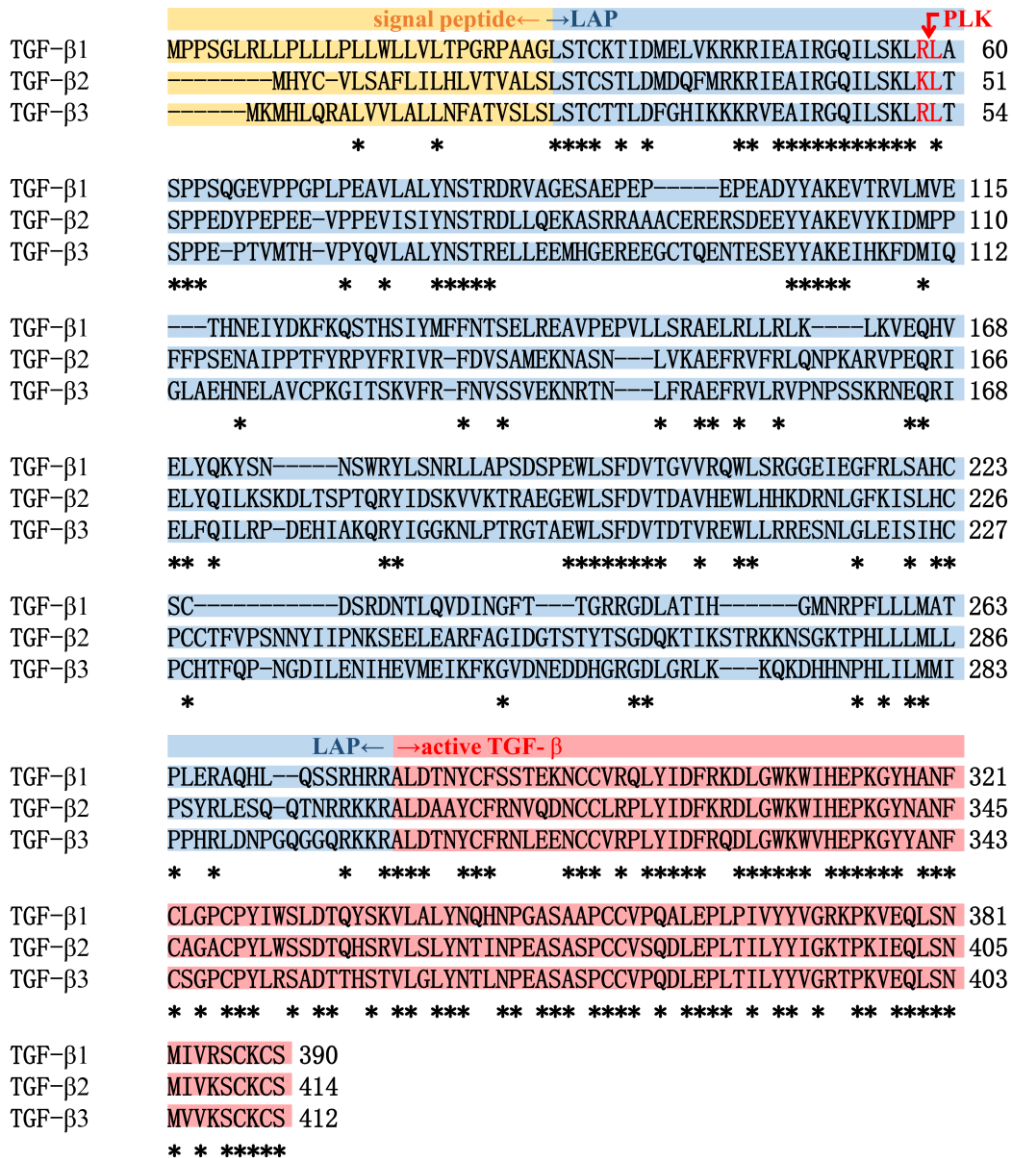
Germany. 419-472.

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                    signal peptide← →LAP                              ⌐PLK
TGF-β1   MPPSGLRLLPLLLPLLWLLVLTPGRPAAGLSTCKTIDMELVKRKRIEAIRGQILSKLRLA  60
TGF-β2   ---------MHYC-VLSAFLILHLVTVALSLSTCSTLDMDQFMRKRIEAIRGQILSKLKLT  51
TGF-β3   -------MKMHLQRALVVLALLNFATVSLSLSTCTTLDFGHIKKKRVEAIRGQILSKLRLT  54
                  *       *       **** * *      ** *********** *

TGF-β1   SPPSQGEVPPGPLPEAVLALYNSTRDRVAGESAEPEP-----EPEADYYAKEVTRVLMVE  115
TGF-β2   SPPEDYPEPEE-VPPEVISIYNSTRDLLQEKASRRAAACERERSDEEYYAKEVYKIDMPP  110
TGF-β3   SPPE-PTVMTH-VPYQVLALYNSTRELLEEMHGEREEGCTQENTESEYYAKEIHKFDMIQ  112
         ***          *  *     *****                   *****     *

TGF-β1   ---THNEIYDKFKQSTHSIYMFFNTSELREAVPEPVLLSRAELRLLRLK----LKVEQHV  168
TGF-β2   FFPSENAIPPTFYRPYFRIVR-FDVSAMEKNASN---LVKAEFRVFRLQNPKARVPEQRI  166
TGF-β3   GLAEHNELAVCPKGITSKVFR-FNVSSVEKNRTN---LFRAEFRVLRVPNPSSKRNEQRI  168
              *            * *        * ** * *        **

TGF-β1   ELYQKYSN-----NSWRYLSNRLLAPSDSPEWLSFDVTGVVRQWLSRGGEIEGFRLSAHC  223
TGF-β2   ELYQILKSKDLTSPTQRYIDSKVVKTRAEGEWLSFDVTDAVHEWLHHKDRNLGFKISLHC  226
TGF-β3   ELFQILRP-DEHIAKQRYIGGKNLPTRGTAEWLSFDVTDTVREWLLRRESNLGLEISIHC  227
         ** *          **         ******* *  **         *     * **

TGF-β1   SC-----------DSRDNTLQVDINGFT---TGRRGDLATIH------GMNRPFLLLMAT  263
TGF-β2   PCCTFVPSNNYIIPNKSEELEARFAGIDGTSTYTSGDQKTIKSTRKKNSGKTPHLLLMLL  286
TGF-β3   PCHTFQP-NGDILENIHEVMEIKFKGVDNEDDHGRGDLGRLK---KQKDHHNPHLILMMI  283
         *                        *          **              * * **

                    LAP← →active TGF-β
TGF-β1   PLERAQHL--QSSRHRRALDTNYCFSSTEKNCCVRQLYIDFRKDLGWKWIHEPKGYHANF  321
TGF-β2   PSYRLESQ-QTNRRKKRALDAAYCFRNVQDNCCLRPLYIDFKRDLGWKWIHEPKGYNANF  345
TGF-β3   PPHRLDNPGQGGQRKKRALDTNYCFRNLEENCCVRPLYIDFRQDLGWKWVHEPKGYYANF  343
         * *           *  ****  ***      *** * *****  ****** ****** ***

TGF-β1   CLGPCPYIWSLDTQYSKVLALYNQHNPGASAAPCCVPQALEPLPIVYYVGRKPKVEQLSN  381
TGF-β2   CAGACPYLWSSDTQHSRVLSLYNTINPEASASPCCVSQDLEPLTILYYIGKTPKIEQLSN  405
TGF-β3   CSGPCPYLRSADTTHSTVLGLYNTLNPEASASPCCVPQDLEPLTILYYVGRTPKVEQLSN  403
         * * ***    * **   * ** ***   ** *** **** * **** * ** *   ** *****

TGF-β1   MIVRSCKCS  390
TGF-β2   MIVKSCKCS  414
TGF-β3   MVVKSCKCS  412
         * * *****
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Figure S1