

TCF4-K MVTLVQHSFSNSAHSLDVYSITFLVDWHLGQRNNTMFSKRLEKIAQVPLLFPFIFIILTNYSKMEAVESQPSFFKTSQDIVCTWENCYSSFSRRPLEMESHVIQTGVQWHHLSSLQPP  
 TCF4-J MVTLVQHSFSNSAHSLDVYSITFLVDWHLGQRNNTMFSKRLEKIAQVPLLFPFIFIILTNYSKMEAVESQPSFFKTSQDIVCTWENCYSSFSRRPLE**QMFC****KHQSKNI****IISWTGMVAHTC**  
 TCF4-L MESHVIQTGVQWHHLSSLQPP

### AD1

TCF4-K PPRFKLSSCLSLSTRDRRLCDFAKMHHQQRMAALGTDKE LSDLLDFSAMFSPPVSGKNGPTSLASGHFTGSNVEDRSSSGSWGNGGHPSPSRNYGDGTPYDHMTSRDLGSHDNLSPPFVNS  
 TCF4-J **NPSTLGGQG**-----LCDFAKMHHQQRMAALGTDKE LSDLLDFSAMFSPPVSGKNGPTSLASGHFTGSNVEDRSSSGSWGNGGHPSPSRNYGDGTPYDHMTSRDLGSHDNLSPPFVNS  
 TCF4-L PPRFKLSSCLSLSTRDRRLCDFAKMHHQQRMAALGTDKE LSDLLDFSAMFSPPVSGKNGPTSLASGHFTGSNVEDRSSSGSWGNGGHPSPSRNYGDGTPYDHMTSRDLGSHDNLSPPFVNS  
 TCF4-B MHHQQRMAALGTDKE LSDLLDFSAMFSPPVSGKNGPTSLASGHFTGSNVEDRSSSGSWGNGGHPSPSRNYGDGTPYDHMTSRDLGSHDNLSPPFVNS  
 TCF4-E **MQRAKTELFRLQIVT**DDLRKNEMFSPPVSGKNGPTSLASGHFTGSNVEDRSSSGSWGNGGHPSPSRNYGDGTPYDHMTSRDLGSHDNLSPPFVNS  
 TCF4-M **MRASKGSEGCQHAVTSQVLTGAGGDQTE**MFSPPVSGKNGPTSLASGHFTGSNVEDRSSSGSWGNGGHPSPSRNYGDGTPYDHMTSRDLGSHDNLSPPFVNS  
 TCF4-O **MLEREGVKERV**MFSPPVSGKNGPTSLASGHFTGSNVEDRSSSGSWGNGGHPSPSRNYGDGTPYDHMTSRDLGSHDNLSPPFVNS  
 TCF4-P **MEMDIATFMAK**MFSPPVSGKNGPTSLASGHFTGSNVEDRSSSGSWGNGGHPSPSRNYGDGTPYDHMTSRDLGSHDNLSPPFVNS  
 TCF4-C MFSPPVSGKNGPTSLASGHFTGSNVEDRSSSGSWGNGGHPSPSRNYGDGTPYDHMTSRDLGSHDNLSPPFVNS  
 TCF4-N **MLKMFFRISQVAGSSWYSKD**VEDRSSSGSWGNGGHPSPSRNYGDGTPYDHMTSRDLGSHDNLSPPFVNS  
 TCF4-F **MEEDSRD**VEDRSSSGSWGNGGHPSPSRNYGDGTPYDHMTSRDLGSHDNLSPPFVNS  
 TCF4-R **MSIFEN**VEDRSSSGSWGNGGHPSPSRNYGDGTPYDHMTSRDLGSHDNLSPPFVNS  
 TCF4-Q **MTSRDLGSHDNLSPPFVNS**  
 TCF4-G **MKDIFQFIIARVRKCYSLSCLHTLPVV**

1

NLS

2

TCF4 RIQS KTERGSYSSYGRESNLQGCHQ**§**LLGGDMMDMGNPGTLSPTKPGSQYYQYSSNNP<sup>RRR</sup>PLHSSAMEVQTKKVRKVPPGLPSSVYAPSASTADYNRDS PGYPSSKPATSTFPSSFFMQDGH  
 TCF4-G **PTLR**KTERGSYSSYGRESNLQGCHQ**§**LLGGDMMDMGNPGTLSPTKPGSQYYQYSSNNP<sup>RRR</sup>PLHSSAMEVQTKKVRKVPPGLPSSVYAPSASTADYNRDS PGYPSSKPATSTFPSSFFMQDGH  
 TCF4-D MDMGNPGTLSPTKPGSQYYQYSSNNP<sup>RRR</sup>PLHSSAMEVQTKKVRKVPPGLPSSVYAPSASTADYNRDS PGYPSSKPATSTFPSSFFMQDGH  
 TCF4-A **MYCAYTI**PGMGGNSLMMYYNGKA**VY**APSASTADYNRDS PGYPSSKPATSTFPSSFFMQDGH  
 TCF4-H **MKFQ**QCRCSDTGLCCLDHEGKAE**VY**APSASTADYNRDS PGYPSSKPATSTFPSSFFMQDGH  
 TCF4-I MQDGH

### AD2

TCF4 HSSDPWSSSGMNQPGYAGMLGNSSHIPQSSSYCSLH<sup>1</sup>PHERLSYP<sup>2</sup>SHSSADINSSL<sup>3</sup>PPM<sup>4</sup>TFHRS<sup>5</sup>GTNHYSTSSCTP<sup>6</sup>PANG<sup>7</sup>TDSIMANRGSGAAGSSQTGDALGKALASIYSPDHTNNSFSSN  
 TCF4 **PSTPVGSPPSLS****A**GTAWSRNGGQASSSPNYE<sup>3</sup>GPLHSLQS<sup>4</sup>RIEDRLERLDDAIHVLRNHAVG<sup>5</sup>P<sup>6</sup>AMP<sup>7</sup>GGHGDMHGIIGPSHNGAMGLGSGYGTG<sup>8</sup>L<sup>9</sup>SANRHSLMV<sup>10</sup>GTHREDGV<sup>11</sup>ALRGSHSL  
 TCF4 LPNQVPVPQLPVQ<sup>1</sup>SATSPDLNPPQ<sup>2</sup>D<sup>3</sup>PYRGMP<sup>4</sup>PGLQGQSV<sup>5</sup>SGS<sup>6</sup>SEIKS<sup>7</sup>D<sup>8</sup>E<sup>9</sup>G<sup>10</sup>D<sup>11</sup>E<sup>12</sup>N<sup>13</sup>LQDTKS<sup>14</sup>SEDKKL<sup>15</sup>DDKKDIKS<sup>16</sup>I<sup>17</sup>S<sup>18</sup>[**R****S**]SNNDDEDLTPEQKAEREKERRMANNARERL<sup>19</sup>RVRDINEAFKE  
 TCF4 LGRMVQLHLKSDKPQT<sup>1</sup>KLL<sup>2</sup>L<sup>3</sup>HQA<sup>4</sup>AV<sup>5</sup>IL<sup>6</sup>S<sup>7</sup>EQ<sup>8</sup>QVR<sup>9</sup>ERN<sup>10</sup>L<sup>11</sup>NPKAAC<sup>12</sup>LR<sup>13</sup>EE<sup>14</sup>KVS<sup>15</sup>SE<sup>16</sup>PP<sup>17</sup>PL<sup>18</sup>LAG<sup>19</sup>PHPGMGDASNHMGQM

Supporting Figure S1. Alignment of TCF4 isoforms. Amino acids different from the consensus are in blue, localization of functional domains is indicated with lines above the sequence. Amino acid(s) in parentheses are absent from (1) isoforms coded by transcripts spliced at acceptor II of exon 8, (2) Δ isoforms coded by transcripts without exons 8-9, (3) isoforms coded by transcripts spliced at acceptor II of exon 15, (4) – isoforms (as opposed to + isoforms) coded by transcripts spliced at donor I of exon 18. AD, activation domain; NLS, nuclear localization signal; bHLH, basic helix-loop-helix domain.