**Table 1. EWS Fusion Gene DNA Sequence and In-frame Fusion Peptides Spanning the Breakpoint**

EWS Gene (Fusion exons) DNA Sequence (60 bp EWS and for fusion partner genes30<> 30bp) In-Frame 20-mer Peptide

EWS (normal)

GCCAACAGAGCAGCAGCTACGGGCAGCAGAgtgagttgctaagagagaaaaccaaataagaat SQQSSSYGQQSSFRQDHPSS

EWS-FLI1 exon 7-7 (N=17/35 EWS-FLI1, 49%)

GCCAACAGAGCAGCAGCTACGGGCAGCAGA<>ACCCTTCTTATGACTCAGTCAGAAGAGGAG SQQSSSYGQQ<>NPSYDSVRRG

EWS- FLI1 exon 7-6 (N=11/35 EWS-FLI1 = 31%)

GCCAACAGAGCAGCAGCTACGGGCAGCAGA<>GTTCACTGCTGGCCTATAATACAACCTCCC SQQSSSYGQQ<>SSLLAYNTTS

EWS-FLI1 exon 7-10 (N=1)

GCCAACAGAGCAGCAGCTACGGGCAGCAGA<>GAAGCGGGCAGATCCAGCTGTGGCAATTCC SQQSSSYGQQ<>RSGQIQLWQF

EWS-FEV exon 7-2 (N=1)

GCCAACAGAGCAGCAGCTACGGGCAGCAGA<>ATCCCGTCGGAGACGGTCTCTTCAAGGACG SQQSSSYGQQ<>NPVGDGLFKD

EWS-WT1 exon 7-7 (N=5/7 EWS-WT1 DSRCT, 71%)

GCCAACAGAGCAGCAGCTACGGGCAGCAGA<>GTGAGAAACCATACCAGTGTGACTTCAAG SQQSSSYGQQ<>SEKPYQCDFK

EWS-ERG exon 7-9 (N=2/4 EWS-ERG, 50%)

GCCAACAGAGCAGCAGCTACGGGCAGCAGA<>ATTTACCATATGAGCCCCCCAGGAGATCA SQQSSSYGQQ<>NLPYEPPRRS

Key: **Blue: EWS; Red FLI1, FEV, WT1, ERG**