## SUPPLEMENTARY MATERIAL

A	В	С
$ \begin{array}{c} \mathbf{A} & \mathbf{N} & \mathbf{K} & \mathbf{R} \\ 1 & 1 & 1 & 1 & 1 & 1 & 1 & 2 & 1 & 2 & 2 & 1 & \mathbf$	$ \begin{array}{c} J \\ 1 \\ gactigeaacatiggtccgcagegtaagtactcctctactcgatcaaattatigatti \\ N D S S S G K G D Y P \\ 61 \\ cateccctaagetticcagtticaagtifGATCACACAGGGGGAAGGAATATACCA \\ 12 \\ H H K V Q Y E N F P Q A D P Q P A N P P \\ 121 \\ cATCAAMAGTACAMACGAAATTACCAAAGTACCAAGGAAGAGCTCCT \\ 12 \\ P E E M E S G P E F N I N R K G E E O Y \\ 181 \\ cCTGAAGAGTGGATGGAGCTGGACGCGAAAAATATCAACAGGAAGGGGAAGAACAGTA \\ 24 A D G H F P D E S L V P D D S S D A R \\ 241 \\ GCTCGTAHGGATGGAGCTGGACGCCGAAAAAATATCAACAGGAAGGGCCAAGTACATACCACGGGTTGGACGCCCATAAAAGAAGGCCAAGTCATTCCCAGTGAAGGGGCTTGGACGCCCATAAAAGAAGGCCAAGTCATTCCCAGTGAAGAGTTTTCCAGGCGGCGCAATAACAACAAGGAAGG$	1 gagagatcgaggatctggtgatctgtgagccacaaggacatggcgatgttgtgtgattcacat 1 gagagatcgaggatctgtgtgttgtgtgtgtgtgtgtgtg

1601 roomeanter 254 \* 1741 CTTAAccettcactatagetgggceaaaacagegeecetceegtatceaggatggeea 1801 egeaegeeaaatteaaaagtegetattgaatataactagtttteageeataaacteaac 1861 a

504 E S G G S L E S I L S N L I A R F E L S 1681 TGGAGAGTGGTGGGGGCTTAGAAAGCATATTAAGTAACTTAATAGCCCGCTTTGAATTAT

Figure S1. The nucleotide and protein sequences of three Es-Caspases. (A) The sequences of Es-Caspase 3. (B) The sequences of Es-Caspase 7. (C) The sequences of Es-Caspase 8. The "ATG" in green is the start codon, the asterisk (\*) indicates the stop codon.



**Figure S2. Multiple sequence alignment with selected species and bioinformatics analysis of three Es-Caspases.** A1-C1. The prediction of 2D-structure of three Es-Caspases. A2-C2. Sequence alignments of Es-Caspases. Consensus residues are in yellow (identical), blue (conservative) and green (block of similar) colour, the conservative region is in red box. A3-C3. The phylogenetic trees of three Es-Caspases. A4-C4. The predicted 3D-structure of three Es-Caspases.

## Table 1. Primers and probes used in this article.

Name	Sequences	application
Caspase 3-mf-F	CTTCDTCCAGTTTTGCCGDGGA	Middle-fragment cloning
Caspase 3-mf-R	CAAGAACTTGCTGCCTCTGAG	
Caspase 7-mf-F	AGTAVGTCCGNACGKCYCC	
Caspase 7-mf-R	CGCHCANGDASTGGATGAA	
Caspase 8-mf-F	CATYCTNTCGCATGGNGA	
Caspase 8-mf-R	NGACYTTCTTYTTCTCRAAN	
Caspase 3-3R-F1	GCTGTTCCTCTTCAACTTTTGTCGA	3'RACE cloning
Caspase 3-3R-F2	AAGTCGGTGGACCAAGATGC	
Caspase 7-3R-F1	GTGCTGACTTGCCCACCTTGCTTTTAC	
Caspase 7-3R-F2	ATGCGTAAAGTCTACTTCCCTGTGA	
Caspase 8-3R-F1	ACAGAAGACTCGCCAGAGCCTAAAG	
Caspase 8-3R-F2	CTTAATAGCCCGCTTTGAATTATCTT	
3'RACE Outer primer	TACCGTCGTTCCACTAGTGATTT	
3'RACE Inner primer	CGCGGATCCTCCACTAGTGATTTCACTATAGG	
Caspase 3-5R-R1	GACAAAAGTTGAAGAGGAACAG	5'RACE cloning
Caspase 3-5R-R2	CTCAGGCTGGGGCACTGCTC	
Caspase 7-5R-R1	TGTACACCTTTGTCAGTGCGCATACC	
Caspase 7-5R-R2	CGCATACCCCTGCATGCCTGGATG	
Caspase 8-5R-R1	CTAACAAAGGTTTCTTCAAGGGGTCG	
Caspase 8-5R-R2	CGACCTGTCTCTGAATACCAATCCCT	
Long primer	TAATACGACTCACTATAGGGCAAGCAGTGGTA	-
	TCAACGCAGAGT	
Short primer	CTAATACGACTCACTATAGGGC	
Caspase 3-rt-F	GGGCTATCTCGTGACTGTGTGGGT	Semi-quantitative RT-PCR
Caspase 3-rt-R	GTGAGTTTTTGTCGTGGTTCCTTG	&ISH probes
Caspase 7-rt-F	TTCATGTTGAGGAATCTTGG	
Caspase 7-rt-R	CTTATTGACTGGGTGGTAGG	
Caspase 8-rt-F	AGAGAGGAGGAGTAGAGCCAGAC	
Caspase 8-rt-R	GGTTATCAAAATGCAACACATGA	
β-actin-rt-F	TCGTGCTCGACTCTGGTG	
β-actin-rt-R	GCAGCTCGTAAGACTTCTCC	
Caspase 3-fl-F	ATGAAGCGGCAGGAAGAGGCTACA	Antibody preparation
Caspase 3-fl-R	CTACTGGCTTAGCAGCTGTGTTGGGT	