

Description of Additional Supplementary Files

File Name: Supplementary Data 1

Description: HPF1 sequences across the *Animalia* kingdom used for the phylogenetic analysis.

File Name: Supplementary Data 2

Description: Overview of ADPr sites identified using Af1521 enrichment followed by mass spectrometry.

File Name: Supplementary Data 3

Description: Oligonucleotides used in this study.