Human canonical CD157/Bst1 is an alternatively spliced isoform masking a previously unidentified primate-specific exon included in a novel transcript

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SUPPLEMENTARY INFORMATION

Figure legends

Supplementary Figure 1. Genomic nucleotide sequence of human *BST1* from exon 1 to exon 2, encompassing exon 1b. Nucleotide sequence of human *BST1* from the 5' end of exon 1 to the 3' end of exon 2. Exons 1 and 2 are shaded in blue; exon 1b is shaded in orange. GT/AG splice sites are shaded in yellow. The branch point (open box) and polypyrimidine tract (grey box) associated with exon 1b are indicated. The nucleotide sequence was analysed for splicing signals using Human Splicing Finder[1] and the SROOGLE program[2].

Supplementary Figure 2. Quantification of *BST1* transcripts. Expression levels of *BST1-001* (top panel) and *BST1-002* (lower panel) in ten PMN samples purified from peripheral blood of healthy subjects. Transcript expression was calculated relative to the *GUSB* endogenous control, using the ΔΔCt method. Bars represent the fold change of each sample relative to the mean of all samples analysed. Each PMN sample was examined in triplicate (n = 3).

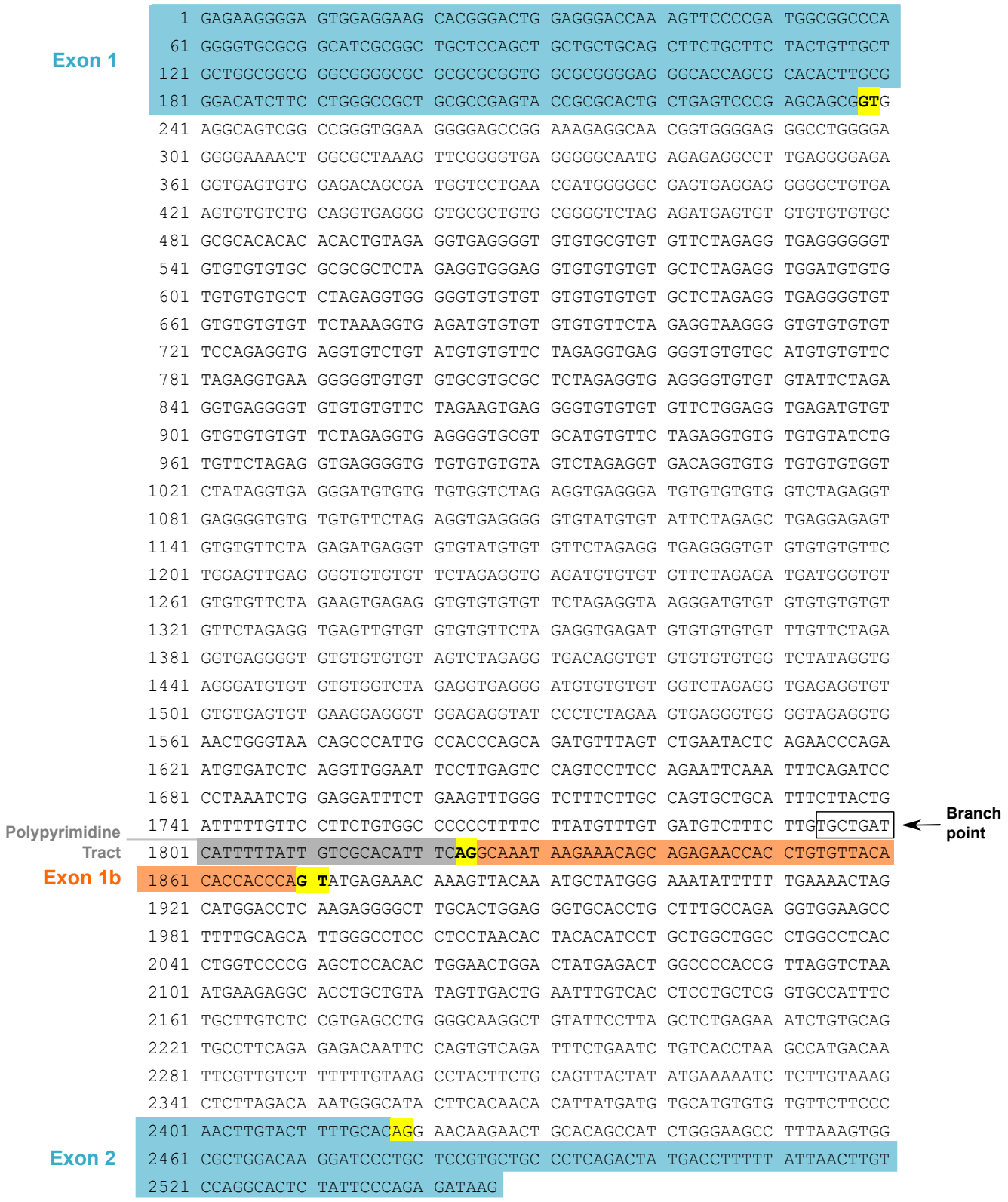
Supplementary Figure 3. Uncut gels for *BST1* expression profiles by RT-PCR.

Supplementary Figure 4. Original gels for western blotting. Top panel show gels from which band images were obtained for CD157 detection by western blotting; bottom panel shows original gel strips for phosphorylation analyses by western blot.

Supplementary Figure 5. Original blot showing CD157 in PMN and U937.

Supplementary References

1. Desmet, F. O. *et al.* Human Splicing Finder: an online bioinformatics tool to predict splicing signals. *Nucleic acids research* **37**, e67, doi:10.1093/nar/gkp215 (2009).
2. Schwartz, S., Hall, E. & Ast, G. SROOGLE: webserver for integrative, user-friendly visualization of splicing signals. *Nucleic acids research* **37**, W189-192, doi:10.1093/nar/gkp320 (2009).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61 GGGGTGCGCG GCATCGCGGC TGCTCCAGCT GCTGCTGCAG CTTCTGCTTC TACTGTTGCT
121 GCTGGCGGCG GGCGGGGCGC GCGCGCGGTG GCGCGGGGAG GGCACCAGCG CACACTTGCG
181 GGACATCTTC CTGGGCCGCT GCGCCGAGTA CCGCGCACTG CTGAGTCCCG AGCAGCGGTG
241 AGGCAGTCGG CCGGGTGGAA GGGGAGCCGG AAAGAGGCAA CGGTGGGGAG GGCCTGGGGA
301 GGGGAAAACT GGCGCTAAAG TTCGGGGTGA GGGGGCAATG AGAGAGGCCT TGAGGGGAGA
361 GGTGAGTGTG GAGACAGCGA TGGTCCTGAA CGATGGGGGC GAGTGAGGAG GGGGCTGTGA
421 AGTGTGTCTG CAGGTGAGGG GTGCGCTGTG CGGGGTCTAG AGATGAGTGT GTGTGTGTGC
481 GCGCACACAC ACACTGTAGA GGTGAGGGGT GTGTGCGTGT GTTCTAGAGG TGAGGGGGGT
541 GTGTGTGTGC GCGCGCTCTA GAGGTGGGAG GTGTGTGTGT GCTCTAGAGG TGGATGTGTG
601 TGTGTGTGCT CTAGAGGTGG GGGTGTGTGT GTGTGTGTGT GCTCTAGAGG TGAGGGGTGT
661 GTGTGTGTGT TCTAAAGGTG AGATGTGTGT GTGTGTTCTA GAGGTAAGGG GTGTGTGTGT
721 TCCAGAGGTG AGGTGTCTGT ATGTGTGTTC TAGAGGTGAG GGGTGTGTGC ATGTGTGTTC
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841 GGTGAGGGGT GTGTGTGTTC TAGAAGTGAG GGGTGTGTGT GTTCTGGAGG TGAGATGTGT
901 GTGTGTGTGT TCTAGAGGTG AGGGGTGCGT GCATGTGTTC TAGAGGTGTG TGTGTATCTG
961 TGTTCTAGAG GTGAGGGGTG TGTGTGTGTA GTCTAGAGGT GACAGGTGTG TGTGTGTGGT
1021 CTATAGGTGA GGGATGTGTG TGTGGTCTAG AGGTGAGGGA TGTGTGTGTG GTCTAGAGGT
1081 GAGGGGTGTG TGTGTTCTAG AGGTGAGGGG GTGTATGTGT ATTCTAGAGC TGAGGAGAGT
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1381 GGTGAGGGGT GTGTGTGTGT AGTCTAGAGG TGACAGGTGT GTGTGTGTGG TCTATAGGTG
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1561 AACTGGGTAA CAGCCCATTG CCACCCAGCA GATGTTTAGT CTGAATACTC AGAACCCAGA
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1681 CCTAAATCTG GAGGATTTCT GAAGTTTGGG TCTTTCTTGC CAGTGCTGCA TTTCTTACTG
1741 ATTTTTGTTC CTTCTGTGGC CCCCCTTTTC TTATGTTTGT GATGTCTTTC TTGTGCTGAT
Branch point
Polypyrimidine Tract
1801 CATTTTTATT GTCGCACATT TCAGGCAAAT AAGAAACAGC AGAGAACCAC CTGTGTTACA
Exon 1b
1861 CACCACCCAG TATGAGAAAC AAAGTTACAA ATGCTATGGG AAATATTTTT TGAAAACTAG
1921 CATGGACCTC AAGAGGGGCT TGCACTGGAG GGTGCACCTG CTTTGCCAGA GGTGGAAGCC
1981 TTTTGCAGCA TTGGGCCTCC CTCCTAACAC TACACATCCT GCTGGCTGGC CTGGCCTCAC
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2281 TTCGTTGTCT TTTTTGTAAG CCTACTTCTG CAGTTACTAT ATGAAAAATC TCTTGTAAAG
2341 CTCTTAGACA AATGGGCATA CTTCACAACA CATTATGATG TGCATGTGTG TGTTCTTCCC
2401 AACTTGTACT TTTGCACAGG AACAAGAACT GCACAGCCAT CTGGGAAGCC TTTAAAGTGG
Exon 2
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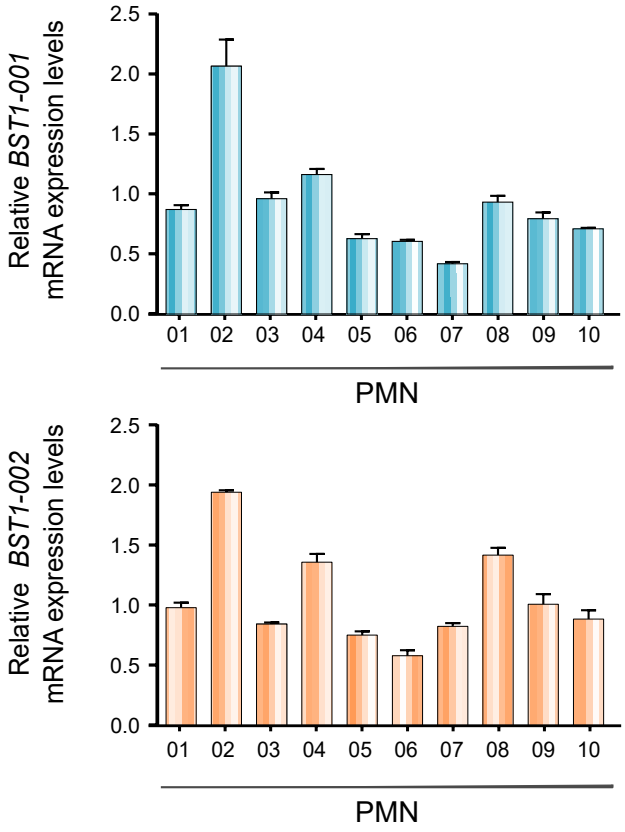
2521 CCAGGCACTC TATTCCCAGA GATAAG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01
02
03
04
05
06
07
08
09
10
PMN
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mRNA expression levels
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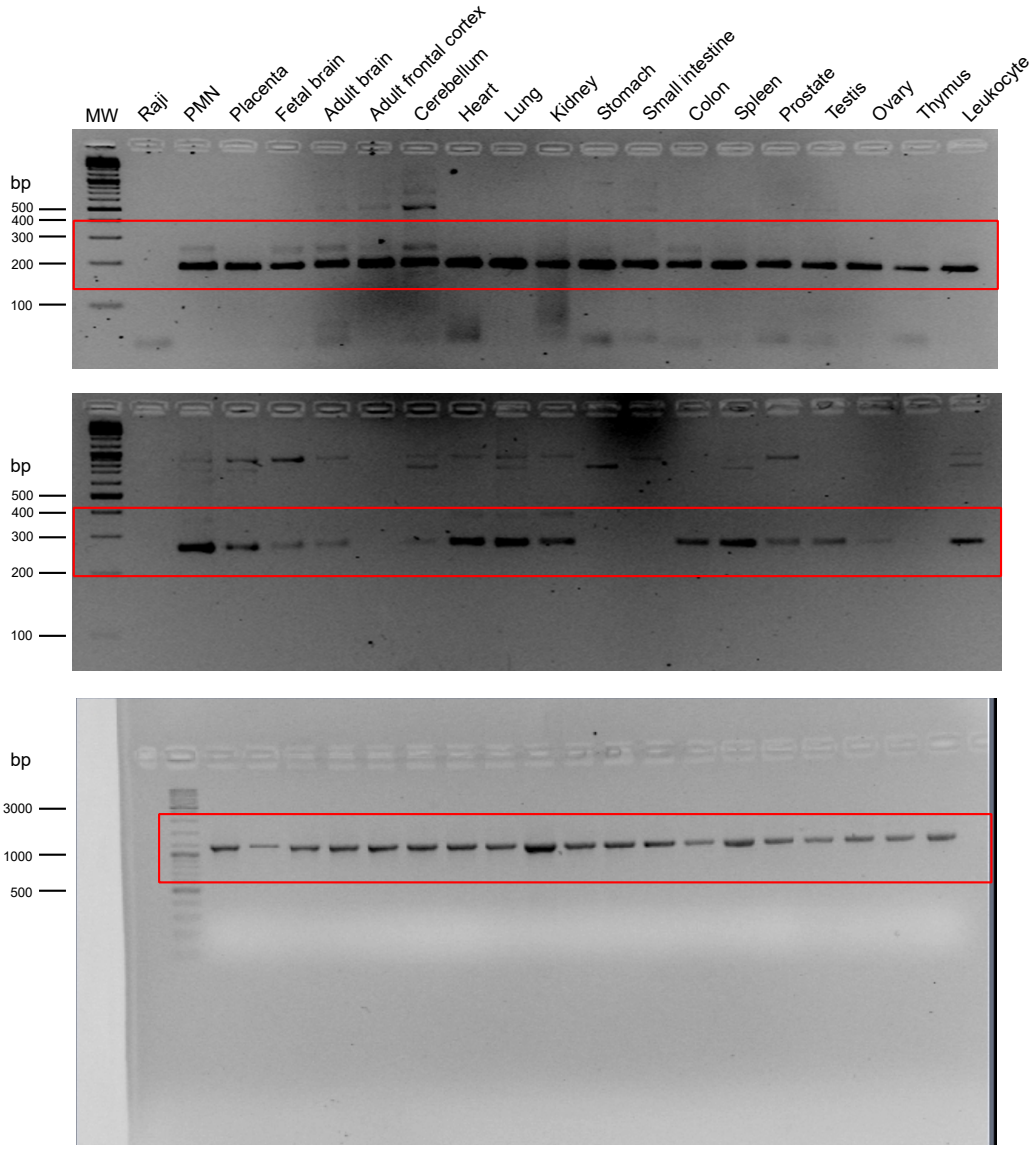
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PMN
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Adult brain
Adult frontal cortex
Cerebellum
Heart
Lung
Kidney
Stomach
Small intestine
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Prostate
Testis
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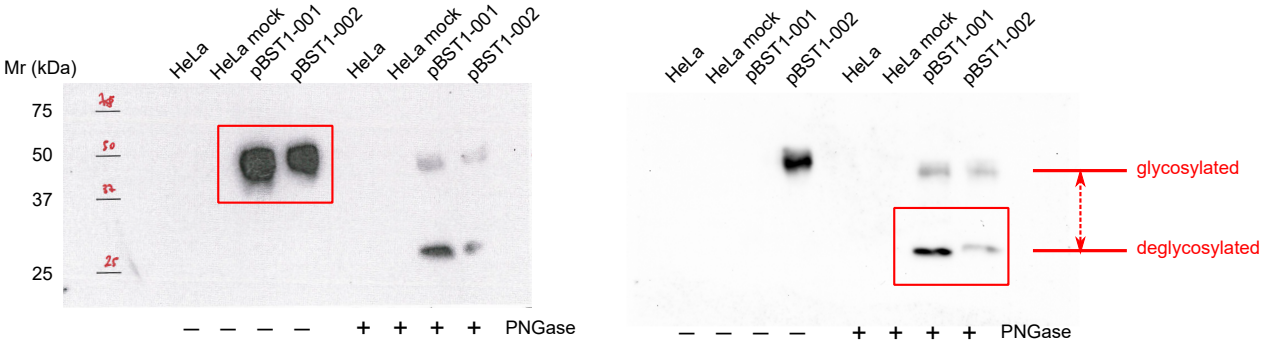
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pBST1-002
HeLa
HeLa mock
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pBST1-002
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50
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25
– – – – + + + + PNGase
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HeLa mock
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glycosylated
deglycosylated
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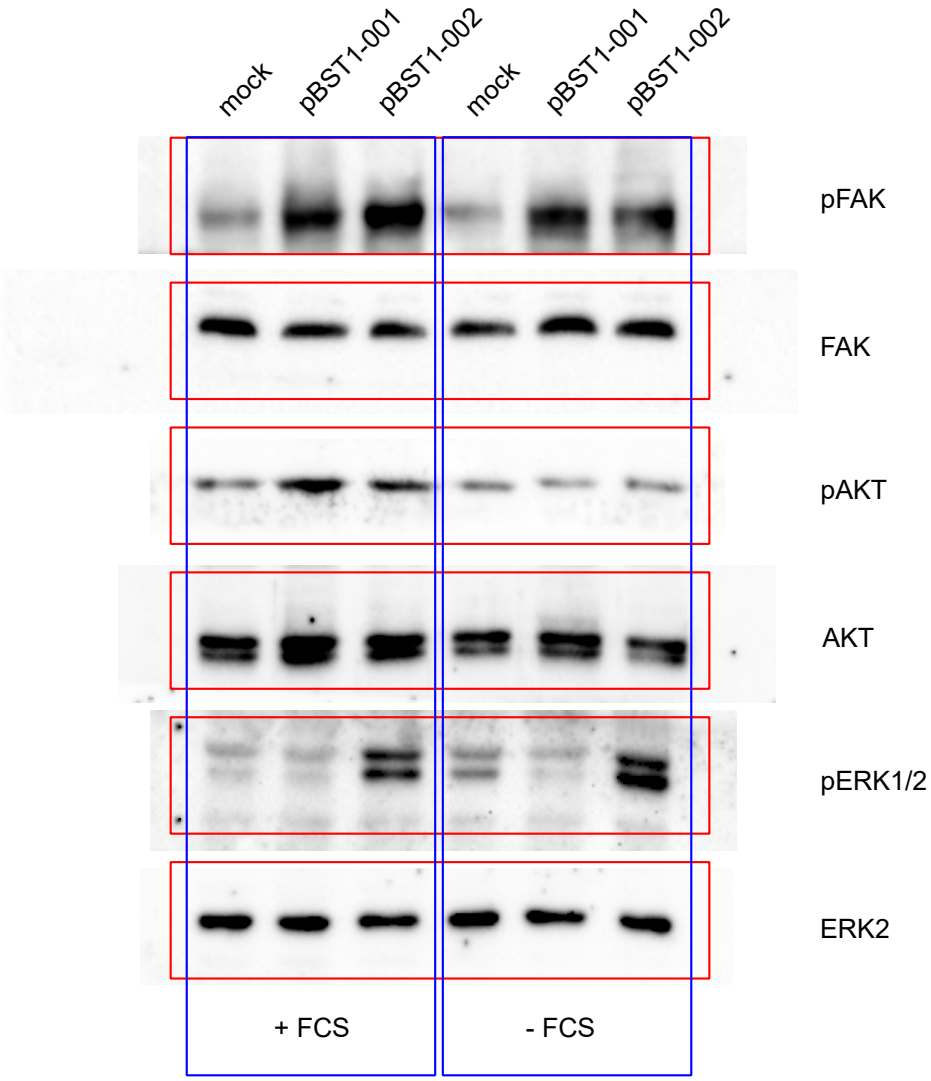
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mock
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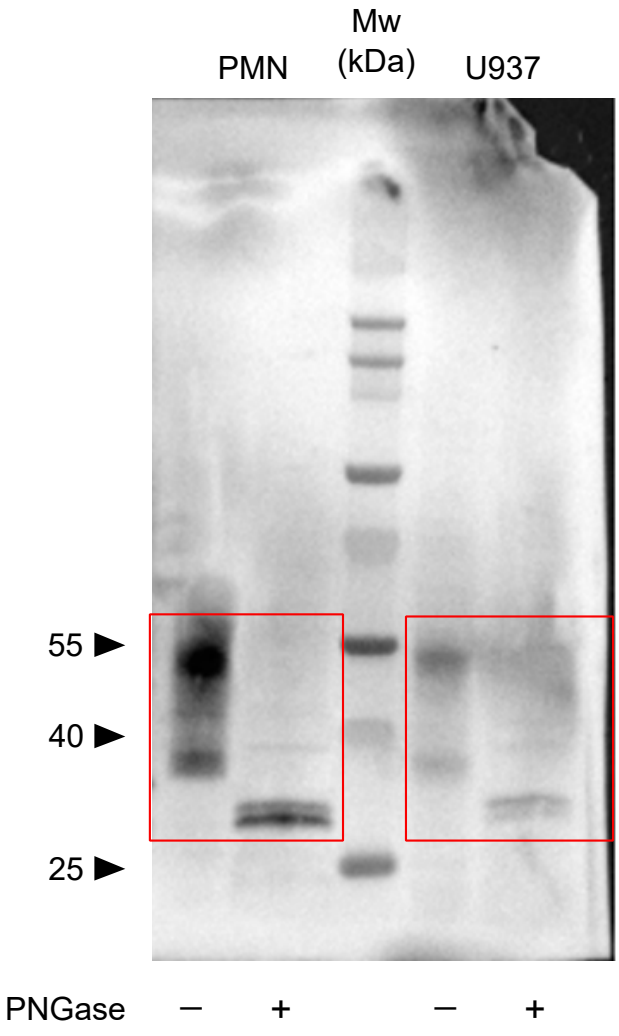
ERK2
+ FCS
- FCS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+
–
+