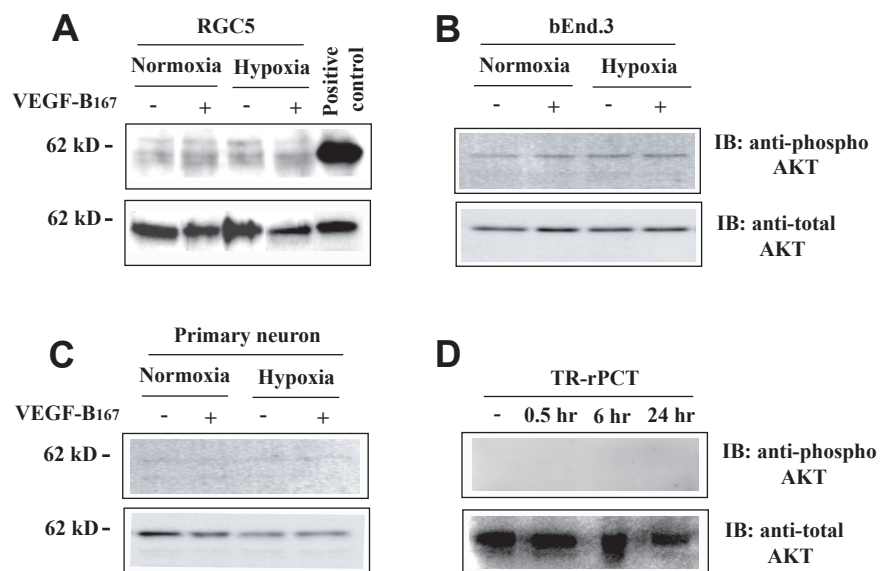




Supplementary Figure 1

Supplementary Figure 1. VEGF-B treatment did not induce Akt phosphorylation in certain types of cells

(**A-C**) VEGF-B treatment did not induce Akt phosphorylation in the RGC5, bEnd.3 cells, and the primary neurons using the Western immunoblot (IB) assay and antibodies against the phosphorylated and total Akt ten minutes after VEGF-B treatment in both normoxia and hypoxia. Constitutive Akt activation was observed in these cells. (**D**) VEGF-B treatment did not induce Akt phosphorylation in the TR-rPCT cells at different time points after VEGF-B treatment (0.5-24 hr) using the Western immunoblot (IB) assay and antibodies against the phosphorylated and total Akt.

Supplementary Table 1. Primers used for realtime-PCR

Gene name	Accession #	Orientation	Primer sequence (5' - 3')	Species
Bad	NM_007522	forward	GAGGAGGAGCTTAGCCCTTT	mouse
Bad	NM_007522	reverse	AGGAACCCTCAAATCATCG	mouse
Bad	NM_022698	forward	GAAGATGAAGGGATGGAGGA	rat
Bad	NM_022698	reverse	AGGAACCCTCAAATTCATCG	rat
Bak1 (Bak)	NM_007523	forward	ATATTAACCGGCGCTACGAC	mouse
Bak1 (Bak)	NM_007523	reverse	AGGCGATCTTGGTGAAGAGT	mouse
Bak1 (Bak)	NM_053812	forward	CTACGACACGGAGTTCCAGA	rat
Bak1 (Bak)	NM_053812	reverse	AGCTGATGCCGCTCTTAAAT	rat
Bax	NM_007527	forward	TAGCAAACCTGGTGCTCAAGG	mouse
Bax	NM_007527	reverse	TCTTGGATCCAGACAAGCAG	mouse
Bax	NM_017059	forward	TAGCAAACCTGGTGCTCAAGG	rat
Bax	NM_017059	reverse	TCTTGGATCCAGACAAGCAG	rat
Bbc3 (Puma)	NM_133234	forward	GTGTGGAGGAGGAGGAGTG	mouse
Bbc3 (Puma)	NM_133234	reverse	TCGATGCTGCTCTTCTTGTC	mouse
Bbc3 (Puma)	NM_173837	forward	CGGAGACAAGAAGAGCAACA	rat
Bbc3 (Puma)	NM_173837	reverse	CACCTAGTTGGGCTCCATTT	rat
Bcl2l11	NM_009754	forward	GAGATACGGATTGCACAGGA	mouse
Bcl2l11	NM_009754	reverse	ATTTGAGGGTGGTCTTCAGC	mouse
Bcl2l11	NM_022612	forward	CCAGGCCTTCAACCATTATC	rat
Bcl2l11	NM_022612	reverse	CTCATTGAACTCGTCTCCGA	rat
Bid	NM_007544	forward	AGACGAGCTGCAGACAGATG	mouse

Bid	NM_007544	reverse	GGTCCATCTCATCGCCTATT	mouse
Bid	NM_022684	forward	CCCACACTGGTGAGACAACT	rat
Bid	NM_022684	reverse	TGTCGTTCTCCATGTCCCTA	rat
Bid3 (Hrk)	NM_057130	forward	GAAACCCTGTGTCCTTGGAG	rat
Bid3 (Hrk)	NM_057130	reverse	CGTTCCCACCATCAACTCT	rat
Bid3 (Hrk)	NM_007545	forward	GAAACCCTGTGTCCTTGGAG	mouse
Bid3 (Hrk)	NM_007545	reverse	TGTCTGTGTTTCCACCATCA	mouse
Bik	NM_007546	forward	CTCTGAGACTCCCAGCATGA	mouse
Bik	NM_007546	reverse	GACACAGGTCCATCTCATCG	mouse
Bik	NM_053704	forward	AGCTTGATTGGAAGCCTCAC	rat
Bik	NM_053704	reverse	AAGAAGACCAGCAGCACCAT	rat
Bmf	NM_138313	forward	AGAGATGGAGCCACCTCAGT	mouse
Bmf	NM_138313	reverse	AACAGGTCAGCAGAGAGCAA	mouse
Bmf	NM_139258	forward	AAGATGATGTGTTCCAGCCA	rat
Bmf	NM_139258	reverse	GTAAGCGGGAAGAGCTGAAG	rat
Casp2	NM_007610	forward	GGCTACAATGTCCATGTGCT	mouse
Casp2	NM_007610	reverse	CCACTACGCAGGAGTCTGTG	mouse
Casp2	NM_022522	forward	ATGGAAAGAACCATGCACAA	rat
Casp2	NM_022522	reverse	TTAAGGCAAGCATAGCCACA	rat
Casp3	NM_009810	forward	CAAGTCAGTGGACTCTGGGA	mouse
Casp3	NM_009810	reverse	CGAGATGACATTCCAGTGCT	mouse
Casp3	NM_012922	forward	CAAGTCGATGGACTCTGGAA	rat
Casp3	NM_012922	reverse	GTACCATTGCGAGCTGACAT	rat
Casp8	NM_009812	forward	CCCTACAGGGTCATGCTCTT	mouse

Casp8	NM_009812	reverse	CAGGCTCAAGTCATCTTCCA	mouse
Casp8	NM_022277	forward	CAGGTTTCTGCCTACAGGGT	rat
Casp8	NM_022277	reverse	GCTCGAGTTGTCTTGCAGTT	rat
Casp9	NM_015733	forward	CACAGCAAAGGAGCAGAGAG	mouse
Casp9	NM_015733	reverse	TCTGAGAACCTCTGGCTTGA	mouse
Casp9	NM_031632	forward	TTCATGGTGGAGGTGAAGAA	rat
Casp9	NM_031632	reverse	AGCCATGAGAGAGGATGACC	rat
Casp12	NM_009808	forward	CAGCTCAGGAAATGGAGACA	mouse
Casp12	NM_009808	reverse	CCACAGATTCCTTCCAGGAT	mouse
Casp12	NM_130422	forward	AGTTCCTCAGGGAATCCAGA	rat
Casp12	NM_130422	reverse	CCTTCCTTCTCCATCACTGG	rat
Cradd	XM_235061	forward	TGCCTACAGGTGACTGGATG	rat
Cradd	XM_235061	reverse	GACAGTCCCAGAGACAGCAC	rat
Dcn	NM_024129	forward	CTCAAGGTCTGCCCCACTTCT	rat
Dcn	NM_024129	reverse	TCCACAACGGTGATGCTATT	rat
Dedd2	NM_207677	forward	GCTGCTGAGCCAACTCCT	rat
Dedd2	NM_207677	reverse	TTGGAAGAAGAGCTGGGATT	rat
Flt1	NM_010228	forward	GCTCTGATGACCGAACTCAA	mouse
Flt1	NM_010228	reverse	ATTCCACGATCACCATCAGA	mouse
Flt1	NM_019306	forward	CTCACAGCCACTCTCATCGT	rat
Flt1	NM_019306	reverse	ATACACGGTGCAAGTGAGGA	rat
Mbd4	NM_010774	forward	CTCTACGATCTCCGTGCAAA	rat
Mbd4	NM_010774	reverse	AGATCCGGTAGGAGTCGTTG	rat
Olr1 (Lox-1)	NM_133306	forward	CAGCAGAATCAGAACCTCCA	rat

Olr1 (Lox-1)	NM_133306	reverse	CAGAAGCTCCTCCTGCTCTT	rat
Plagl1	NM_012760	forward	CCGATGAAAGCAGATCTCAA	rat
Plagl1	NM_012760	reverse	ACTTTCCCAAACCCTTCCTT	rat
Pmaip1 (Noxa)	NM_021451	forward	GAGTGCACCGGACATAACTG	mouse
Pmaip1 (Noxa)	NM_021451	reverse	CTCGTCCTTCAAGTCTGCTG	mouse
Pmaip1 (Noxa)	NM_001008385	forward	GAGTGCACCGGACATAACTG	rat
Pmaip1 (Noxa)	NM_001008385	reverse	ACTCGTCCTTCAGGTCTGCT	rat
Ppp1r3c	NM_001012072	forward	AACGACATCTCCTCCAGCTT	rat
Ppp1r3c	NM_001012072	reverse	CTTGCAAAGAGCAGTTCTCG	rat
Prkdc	XM_341020	forward	GATGGGAAGAGCAAACCATT	rat
Prkdc	XM_341020	reverse	TTTCATCATGGCCTCGAATA	rat
TNF-alpha	NM_013693	forward	ATGAGAAGTTCCCAAATGGC	mouse
TNF-alpha	NM_013693	reverse	CTCCACTTGGTGGTTTGCTA	mouse
TNF-alpha	NM_012675	forward	CAAGGAGGAGAAGTTCCCAA	rat
TNF-alpha	NM_012675	reverse	CTCTGCTTGGTGGTTTGCTA	rat
Tnfrsf12a	NM_181086	forward	ATGGACTGCGCTTCTTGTC	rat
Tnfrsf12a	NM_181086	reverse	CAGAATGGGCCATAGCATC	rat
Tp53 (p53)	NM_030989	forward	GCCGACCTATCCTTACCATC	rat
Tp53 (p53)	NM_030989	reverse	CTTCTTCTGTACGGCGGTCT	rat
Tp53 (p53)	NM_011640	forward	ACAGTCGGATATGAGCATCG	mouse
Tp53 (p53)	NM_011640	reverse	CCATGGAATTAGGTGACCCT	mouse

Trp53inp1	NM_181084	forward	TCCTCAGCAGAGCACACTTC	mouse & rat
Trp53inp1	NM_181084	reverse	TCCATTGGACAGGACTCAAA	mouse & rat
VEGF-B	NM_011697	forward	AGCCACCAGAAGAAAGTGGT	mouse
VEGF-B	NM_011697	reverse	GCTGGGCACTAGTTGTTTGA	mouse
VEGF-B	NM_053549	forward	TGGTACCTCTGAGCATGGAA	rat
VEGF-B	NM_053549	reverse	GAGGATCTGCATTCGGACTT	rat

Supplementary Table 2. Primers used for realtime-PCR

Gene name	Accession #	Orientation	Primer sequence (5' - 3')	Species
Bad	NM_007522	forward	GAGGAGGAGCTTAGCCCTTT	mouse
Bad	NM_007522	reverse	AGGAACCCTCAAACATCATCG	mouse
Bad	NM_022698	forward	GAAGATGAAGGGATGGAGGA	rat
Bad	NM_022698	reverse	AGGAACCCTCAAATTCATCG	rat
Bak1 (Bak)	NM_007523	forward	ATATTAACCGGCGCTACGAC	mouse
Bak1 (Bak)	NM_007523	reverse	AGGCGATCTTGGTGAAGAGT	mouse
Bak1 (Bak)	NM_053812	forward	CTACGACACGGAGTTCCAGA	rat
Bak1 (Bak)	NM_053812	reverse	AGCTGATGCCGCTCTTAAAT	rat
Bax	NM_007527	forward	TAGCAAACCTGGTGCTCAAGG	mouse
Bax	NM_007527	reverse	TCTTGGATCCAGACAAGCAG	mouse
Bax	NM_017059	forward	TAGCAAACCTGGTGCTCAAGG	rat
Bax	NM_017059	reverse	TCTTGGATCCAGACAAGCAG	rat
Bbc3 (Puma)	NM_133234	forward	GTGTGGAGGAGGAGGAGTG	mouse
Bbc3 (Puma)	NM_133234	reverse	TCGATGCTGCTCTTCTTGTC	mouse
Bbc3 (Puma)	NM_173837	forward	CGGAGACAAGAAGAGCAACA	rat
Bbc3 (Puma)	NM_173837	reverse	CACCTAGTTGGGCTCCATTT	rat
Bcl2l11	NM_009754	forward	GAGATACGGATTGCACAGGA	mouse
Bcl2l11	NM_009754	reverse	ATTTGAGGGTGGTCTTCAGC	mouse
Bcl2l11	NM_022612	forward	CCAGGCCTTCAACCATTATC	rat
Bcl2l11	NM_022612	reverse	CTCATTGAACTCGTCTCCGA	rat
Bid	NM_007544	forward	AGACGAGCTGCAGACAGATG	mouse

Bid	NM_007544	reverse	GGTCCATCTCATCGCCTATT	mouse
Bid	NM_022684	forward	CCCACACTGGTGAGACAACT	rat
Bid	NM_022684	reverse	TGTCGTTCTCCATGTCCCTA	rat
Bid3 (Hrk)	NM_057130	forward	GAAACCCTGTGTCCTTGGAG	rat
Bid3 (Hrk)	NM_057130	reverse	CGTTCCCACCATCAACTCT	rat
Bid3 (Hrk)	NM_007545	forward	GAAACCCTGTGTCCTTGGAG	mouse
Bid3 (Hrk)	NM_007545	reverse	TGTCTGTGTTTCCACCATCA	mouse
Bik	NM_007546	forward	CTCTGAGACTCCCAGCATGA	mouse
Bik	NM_007546	reverse	GACACAGGTCCATCTCATCG	mouse
Bik	NM_053704	forward	AGCTTGATTGGAAGCCTCAC	rat
Bik	NM_053704	reverse	AAGAAGACCAGCAGCACCAT	rat
Bmf	NM_138313	forward	AGAGATGGAGCCACCTCAGT	mouse
Bmf	NM_138313	reverse	AACAGGTCAGCAGAGAGCAA	mouse
Bmf	NM_139258	forward	AAGATGATGTGTTCCAGCCA	rat
Bmf	NM_139258	reverse	GTAAGCGGGAAGAGCTGAAG	rat
Casp2	NM_007610	forward	GGCTACAATGTCCATGTGCT	mouse
Casp2	NM_007610	reverse	CCACTACGCAGGAGTCTGTG	mouse
Casp2	NM_022522	forward	ATGGAAAGAACCATGCACAA	rat
Casp2	NM_022522	reverse	TTAAGGCAAGCATAGCCACA	rat
Casp3	NM_009810	forward	CAAGTCAGTGGACTCTGGGA	mouse
Casp3	NM_009810	reverse	CGAGATGACATTCCAGTGCT	mouse
Casp3	NM_012922	forward	CAAGTCGATGGACTCTGGAA	rat
Casp3	NM_012922	reverse	GTACCATTGCGAGCTGACAT	rat
Casp8	NM_009812	forward	CCCTACAGGGTCATGCTCTT	mouse

Casp8	NM_009812	reverse	CAGGCTCAAGTCATCTTCCA	mouse
Casp8	NM_022277	forward	CAGGTTTCTGCCTACAGGGT	rat
Casp8	NM_022277	reverse	GCTCGAGTTGTCTTGCAGTT	rat
Casp9	NM_015733	forward	CACAGCAAAGGAGCAGAGAG	mouse
Casp9	NM_015733	reverse	TCTGAGAACCTCTGGCTTGA	mouse
Casp9	NM_031632	forward	TTCATGGTGGAGGTGAAGAA	rat
Casp9	NM_031632	reverse	AGCCATGAGAGAGGATGACC	rat
Casp12	NM_009808	forward	CAGCTCAGGAAATGGAGACA	mouse
Casp12	NM_009808	reverse	CCACAGATTCCTTCCAGGAT	mouse
Casp12	NM_130422	forward	AGTTCCTCAGGGAATCCAGA	rat
Casp12	NM_130422	reverse	CCTTCCTTCTCCATCACTGG	rat
Cradd	XM_235061	forward	TGCCTACAGGTGACTGGATG	rat
Cradd	XM_235061	reverse	GACAGTCCCAGAGACAGCAC	rat
Dcn	NM_024129	forward	CTCAAGGTCTGCCCCACTTCT	rat
Dcn	NM_024129	reverse	TCCACAACGGTGATGCTATT	rat
Dedd2	NM_207677	forward	GCTGCTGAGCCAACTCCT	rat
Dedd2	NM_207677	reverse	TTGGAAGAAGAGCTGGGATT	rat
Flt1	NM_010228	forward	GCTCTGATGACCGAACTCAA	mouse
Flt1	NM_010228	reverse	ATTCCACGATCACCATCAGA	mouse
Flt1	NM_019306	forward	CTCACAGCCACTCTCATCGT	rat
Flt1	NM_019306	reverse	ATACACGGTGCAAGTGAGGA	rat
Mbd4	NM_010774	forward	CTCTACGATCTCCGTGCAAA	rat
Mbd4	NM_010774	reverse	AGATCCGGTAGGAGTCGTTG	rat
Olr1 (Lox-1)	NM_133306	forward	CAGCAGAATCAGAACCTCCA	rat

Olr1 (Lox-1)	NM_133306	reverse	CAGAAGCTCCTCCTGCTCTT	rat
Plagl1	NM_012760	forward	CCGATGAAAGCAGATCTCAA	rat
Plagl1	NM_012760	reverse	ACTTTCCCAAACCCTTCCTT	rat
Pmaip1 (Noxa)	NM_021451	forward	GAGTGCACCGGACATAACTG	mouse
Pmaip1 (Noxa)	NM_021451	reverse	CTCGTCCTTCAAGTCTGCTG	mouse
Pmaip1 (Noxa)	NM_001008385	forward	GAGTGCACCGGACATAACTG	rat
Pmaip1 (Noxa)	NM_001008385	reverse	ACTCGTCCTTCAGGTCTGCT	rat
Ppp1r3c	NM_001012072	forward	AACGACATCTCCTCCAGCTT	rat
Ppp1r3c	NM_001012072	reverse	CTTGCAAAGAGCAGTTCTCG	rat
Prkdc	XM_341020	forward	GATGGGAAGAGCAAACCATT	rat
Prkdc	XM_341020	reverse	TTTCATCATGGCCTCGAATA	rat
TNF-alpha	NM_013693	forward	ATGAGAAGTTCCCAAATGGC	mouse
TNF-alpha	NM_013693	reverse	CTCCACTTGGTGGTTTGCTA	mouse
TNF-alpha	NM_012675	forward	CAAGGAGGAGAAGTTCCCAA	rat
TNF-alpha	NM_012675	reverse	CTCTGCTTGGTGGTTTGCTA	rat
Tnfrsf12a	NM_181086	forward	ATGGACTGCGCTTCTTGTC	rat
Tnfrsf12a	NM_181086	reverse	CAGAATGGGCCATAGCATC	rat
Tp53 (p53)	NM_030989	forward	GCCGACCTATCCTTACCATC	rat
Tp53 (p53)	NM_030989	reverse	CTTCTTCTGTACGGCGGTCT	rat
Tp53 (p53)	NM_011640	forward	ACAGTCGGATATGAGCATCG	mouse
Tp53 (p53)	NM_011640	reverse	CCATGGAATTAGGTGACCCT	mouse

Trp53inp1	NM_181084	forward	TCCTCAGCAGAGCACACTTC	mouse & rat
Trp53inp1	NM_181084	reverse	TCCATTGGACAGGACTCAAA	mouse & rat
VEGF-B	NM_011697	forward	AGCCACCAGAAGAAAGTGGT	mouse
VEGF-B	NM_011697	reverse	GCTGGGCACTAGTTGTTTGA	mouse
VEGF-B	NM_053549	forward	TGGTACCTCTGAGCATGGAA	rat
VEGF-B	NM_053549	reverse	GAGGATCTGCATTCGGACTT	rat