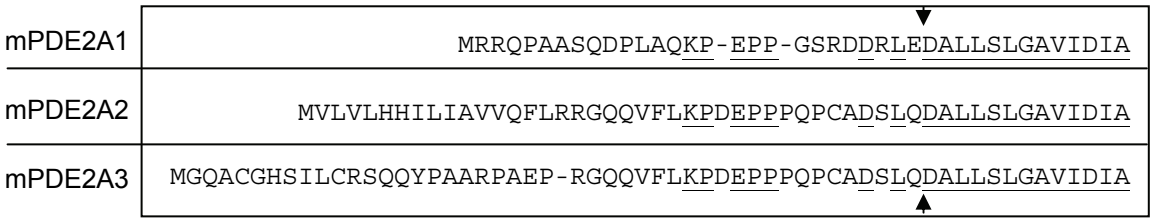


Fig. S1. **Comparison of PDE2A splice variants 1-3.** Shown is the alignment of N-terminal amino acid sequences of PDE2A1-3. Amino acids shared by all isoforms are underlined. Arrows indicate the beginning of common sequences shared by all three variants of PDE2A.

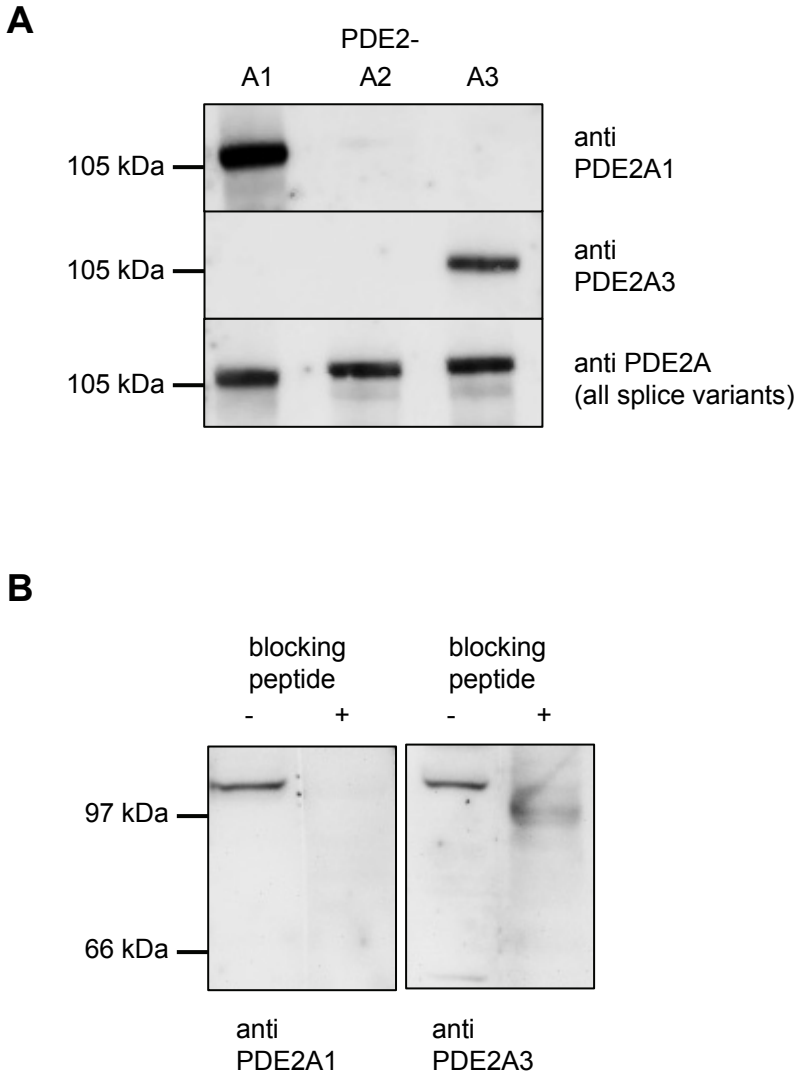


Fig. S2. **Characterization of specific antibodies selectively detecting PDE2A1 or -A3.** Antibodies against unique epitopes of the mouse PDE2 splice variants A1 (amino acids 9-23) and A3 (amino acids 11-25) were generated in rabbits. A, To test antibody specificity HEK 293 cells expressing either of the PDE2A splice variants 1, 2 or 3 were homogenized in lysis buffer containing 1% Triton X-100. A total of 8 µg of protein was applied to SDS-PAGE and transferred to nitrocellulose membranes. PDE2A was then detected using 1:1000 dilutions of the splice variant specific antisera or a commercially available pan-specific PDE2A antibody that detects all splice variants to ensure equal expression levels. Both splice variant specific antibodies detect a single band of 105 kDa in the samples expressing the respective splice variant, whereas no bands are apparent in any other sample. Thus the antibodies are specific for the PDE2A variant they were raised against. B, Antibody reactivity was tested using mouse brain homogenate. 25 µg of protein per lane of an SDS-gel was applied and analyzed by immunoblotting with PDE2A1 or -A3 selective antiserum (diluted 1:5000). Both antibodies reliably detected a band of 105 kDa corresponding to the respective PDE2A splice variant. In both cases adding the immunizing peptide completely blocked the signal.