Claims

1. A nucleic acid having promoter activity, comprising a nucleotide sequence selected from the group comprising SEQ ID NO:1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14 or 15.

2. An expression cassette comprising a molecule of the nucleic acid according to claim 1 and an operably linked transgene.

3. The expression cassette according to claim 2, wherein the transgene encodes a protein or a small inhibitory nucleic acid.

4. The expression cassette according to claim 3, wherein the transgene encodes a protein that is selected from the group comprising factor VIII or a functional variant thereof, factor IX or a functional variant thereof, SMN1 protein (survival motor neuron protein), the RBD-S polypeptide of SARS-cov2, or a therapeutic antibody.

5. An expression vector comprising the nucleic acid according to claim 1 or the expression cassette according to any one of claims 2 to 4.

6. The expression vector according to claim 5, which is a plasmid, AAV, lentivirus or adenovirus.

7. The expression vector according to claim 6, which is an AAV selected from the group comprising the following AAV serotypes: AAV1, AAV2, AAV3, AAV4, AAV5, AAV6, AAV7, AAV8, AAV9, AAV10 AAV11, AAV12, AAV13, AAV14, AAV15, AAV16, rAAV.rh8, rAAV.rhlO, rAAV.rh20, rAAV.rh39, rAAV.Rh74, rAAV.RHM4-l, AAV.hu37, rAAV.Anc80, rAAV.Anc80L65, rAAV.7m8, rAAV.PHP.B, rAAV2.5, rAAV2.6, rAAV2.8, rAAV2.9, rAAV2tYF, rAAV3B, rAAV.LK03, AAV.HSC1, AAV.HSC2, AAV.HSC3, AAV.HSC4, AAV.HSC5, AAV.HSC6, AAV.HSC7, AAV.HSC8, AAV.HSC9, AAV.HSC10 , AAV.HSC11, AAV.HSC12, AAV.HSC13, AAV.HSC14, AAV.HSC15 or AAV.HSC16.

8. A host cell for producing the expression vector according to claims 5 to 7, comprising the nucleic acid according to claim 1 or the expression cassette according to any one of claims 2 to 4, wherein the host cell comprises the nucleic acid according to claim 1 or the expression cassette according to any one of claims 2 to 4.