Active Band 3 (BND3)

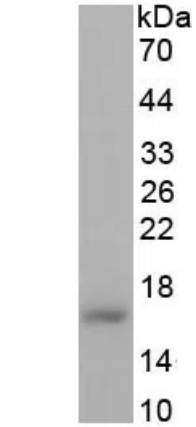
Catalog#:PER12721

概述（Summary）

别称（Alternative Names）	CD233; SLC4A1; SLC4-A1; WD; AE1; DI; EMPB3; EPB3; FR; RTA1A; SW; WD1; WR; Anion Exchange Protein 1; Solute Carrier Family 4,Anion Exchanger,Member 1; Erythrocyte Membrane Protein Band 3
纯度（Purity）	Greater than 95% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Ile558-Phe675】
Accession #	P23562
表达宿主（Host）	E.coli
种属（Species）	Rattus norvegicus (Rat)
预测分子量（Predicted MW）	16.9 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Functions both as a transporter that mediates electroneutral anion exchange across the cell membrane and as a structural protein. Major integral membrane glycoprotein of the erythrocyte membrane; required for normal flexibility and stability of the erythrocyte membrane and for normal erythrocyte shape via the interactions of its cytoplasmic domain with cytoskeletal proteins, glycolytic enzymes, and hemoglobin. Functions as a transporter that mediates the 1:1 exchange of inorganic anions across the erythrocyte membrane. Mediates

chloride-bicarbonate exchange in the kidney, and is required for normal acidification of the urine.

电泳图（SDS-PAGE image）



Greater than 95% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

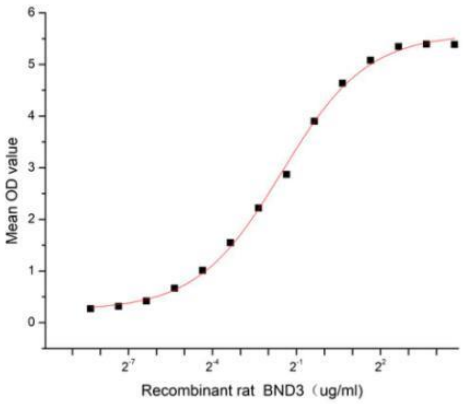


Figure 1. The binding activity of recombinant rat BND3 and recombinant human ANK3

Band 3 (BND3), also known as Anion Exchanger 1 and SLC4A1, is a 90-100 kDa polytropic membrane protein that is part of the anion exchanger (AE) family and is expressed in the erythrocyte plasma membrane, where it mediates the exchange of the cellular HCO3- with CI- in plasma. BND3 is required for normal flexibility and stability of the erythrocyte membrane and for normal erythrocyte shape via the interactions of its cytoplasmic domain with cytoskeletal proteins, glycolytic enzymes, and hemoglobin. Scaffold protein Ankyrin 3, Node Of Ranvier (ANK3) can Interacts with BND3, thus a functional binding ELISA assay was conducted to detect the interaction of recombinant rat BND3 and recombinant human ANK3. Briefly, biotin-linked BND3 were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100 ul were then transferred to ANK3-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST 3 times and incubation with Streptavidin-HRP for 30min, then wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 µl stop solution to the wells and read at 450 nm immediately. The binding activity of recombinant rat BND3 and recombinant human ANK3 was shown in Figure 1, the EC50 for this effect is 0.35 ug/mL.

注意事项（Note）

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