

Band 3 (BND3) Active Protein | BND3 active protein

Active Band 3 (BND3)

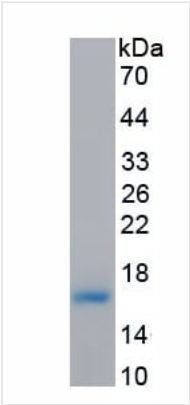
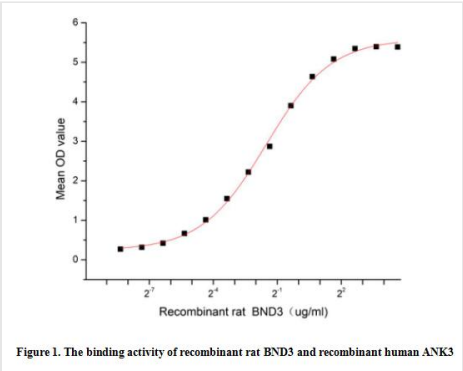
CATALOG # AAA161856	HOST E Coli	APPLICATIONS Activity Assay, Cell Culture
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PRODUCT SYNONYMS

Band 3 (BND3); Active Band 3 (BND3); Band 3; 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 34; BND3 active protein

PRODUCT SPECIFICATIONS

Host	E Coli
Purity/Purification	Greater than 95% by SDS-PAGE
Form/Format	Freeze-dried powder; PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.
Sequence	Ile558~Phe 675
Applicable Applications for BND3 active protein	Activity Assay, Cell Culture
Species	Rat
Expression System	Prokaryotic expression
Tag	N-terminal His Tag
Endotoxin Level	<1.0EU per 1ug (determined by the LAL method)
Isoelectric Point	10.6
Research Area	Metabolic pathway
Preparation and Storage	Store at 2-8 degree C for one month, -80 degree C for 12 months



Bioactivity

Band 3 (BND3), also known as Anion Exchanger 1 and SLC4A1, is a 90-100 kDa polytopic 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 Cl⁻ 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 degree C. 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 degree C. Finally, add 50 ul 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.

SDS-PAGE

Figure. SDS-PAGE

ADDITIONAL INFORMATION

Product Categories/Family for BND3 active protein	Active proteins
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NCBI AND UNIPROT INFORMATION

NCBI GI #	76443687
NCBI GeneID	24779
NCBI Accession #	NP_036783.2
NCBI GenBank Nucleotide #	NM_012651.2
UniProt Accession #	P23562
Molecular Weight	103,173 Da
NCBI Official Full Name	band 3 anion transport protein
NCBI Official Synonym Full Names	solute carrier family 4 (anion exchanger), member 1
NCBI Official Symbol	Slc4a1
NCBI Protein Information	band 3 anion transport protein; AE 1; anion exchanger 1; anion exchange protein 1; solute carrier family 4 member 1; Solute carrier family 4, member 1, anion exchange protein 1 (kidney band 3)
UniProt Protein Name	Band 3 anion transport protein
UniProt Gene Name	Slc4a1
UniProt Synonym Gene Names	Ae1; AE 1; Anion exchanger 1
UniProt Entry Name	B3AT_RAT

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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Online datasheet: <https://stage.aaabiotech.com/e-coli-active-protein/band-3-bnd3/161856>