

For Research Use Only

Band 3/AE 1 Polyclonal antibody

Catalog Number: 18566-1-AP

7 Publications



Basic Information

Catalog Number:

18566-1-AP

Size:

150ul, Concentration: 400 µg/ml by Nanodrop and 300 µg/ml by Bradford method using BSA as the standard;

Source:

Rabbit

Isotype:

IgG

Immunogen Catalog Number:

AG13076

GenBank Accession Number:

BC101570

GeneID (NCBI):

6521

UNIPROT ID:

P02730

Full Name:

solute carrier family 4, anion exchanger, member 1 (erythrocyte membrane protein band 3, Diego blood group)

Calculated MW:

911 aa, 102 kDa

Observed MW:

95 kDa, 50 kDa

Purification Method:

Antigen affinity purification

Recommended Dilutions:

WB 1:200-1:1000

IP 0.5-4.0 µg for 1.0-3.0 mg of total protein lysate

IHC 1:20-1:200

IF-P 1:50-1:500

Applications

Tested Applications:

WB, IHC, IF-P, IP, ELISA

Cited Applications:

WB, IHC, IF

Species Specificity:

human, mouse, rat

Cited Species:

human, mouse, rat, plasmodium falciparum

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

WB: HepG2 cells,

IP: mouse liver tissue,

IHC: human spleen tissue, human stomach cancer tissue, human kidney tissue

IF-P: human placenta tissue,

Background Information

Anion exchanger 1 (AE1), also known as band 3, is a 95-100 kDa transmembrane glycoprotein which is abundantly expressed in erythrocyte plasma membrane and mediates the electroneutral exchange of Cl⁻ and HCO₃⁻. It contains a 52-55 kDa C-terminal membrane crossing domain and a 43 kDa N-terminal cytoplasmic domain. Degradation of band 3 protein occurred during erythrocyte aging. The oxidative stress can also activate the proteolysis of band 3 through caspases. This antibody is expected to recognize the intact band 3 (95-100 kDa) and various degradation products (38-60 kDa). (PMID: 22890269, 29240292, 28130418)

Notable Publications

Author	Pubmed ID	Journal	Application
De-Liang Zhang	30213870	Blood	WB
Xiao Han	31681841	Sci Adv	WB
Cong Li	31885626	Stem Cells Int	IF

Storage

Storage:

Store at -20°C. Stable for one year after shipment.

Storage Buffer:

PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

*** 20ul sizes contain 0.1% BSA

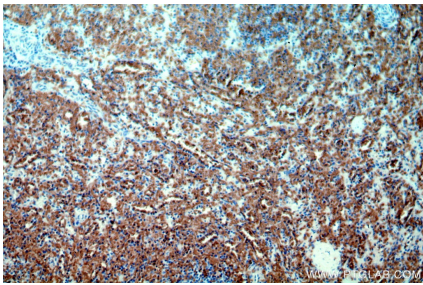
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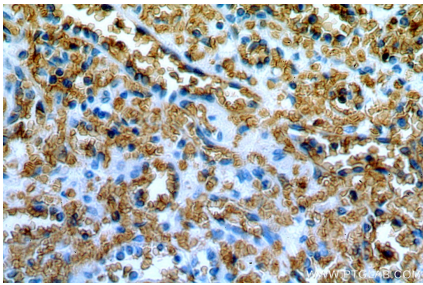
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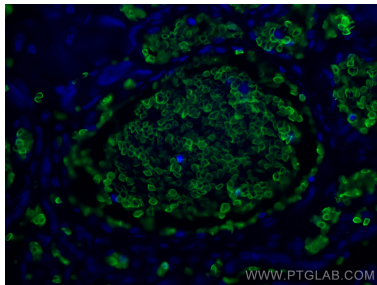
Selected Validation Data



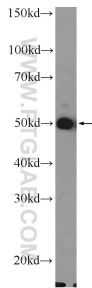
Immunohistochemical analysis of paraffin-embedded human spleen using 18566-1-AP (band 3 antibody) at dilution of 1:50 (under 10x lens).



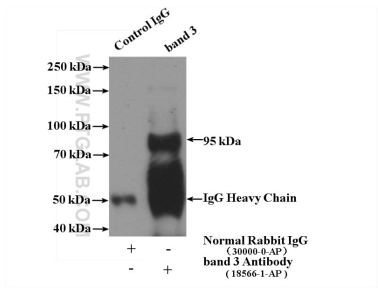
Immunohistochemical analysis of paraffin-embedded human spleen using 18566-1-AP (band 3 antibody) at dilution of 1:50 (under 40x lens).



Immunofluorescent analysis of (4% PFA) fixed human placenta tissue using band 3/ AE1 antibody (18566-1-AP) at dilution of 1:200 and CoraLite®488-Conjugated AffiniPure Goat Anti-Rabbit IgG(H+L).



HepG2 cells were subjected to SDS PAGE followed by western blot with 18566-1-AP (band 3 antibody at dilution of 1:300 incubated at room temperature for 1.5 hours.



IP result of anti-Band 3/ AE1 (IP:18566-1-AP, 4ug; Detection:18566-1-AP 1:300) with mouse liver tissue lysate 4000ug.