

Sortase A5 Recombinant Protein

Recombinant Sortase A5 protein

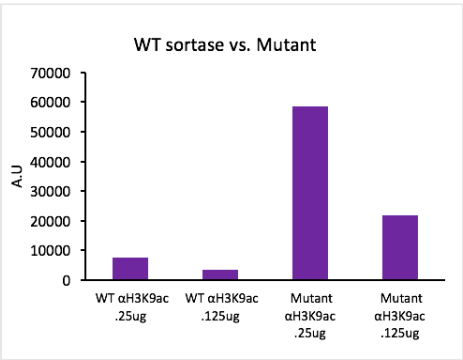
CATALOG # AAA59632	HOST E Coli
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PRODUCT SYNONYMS

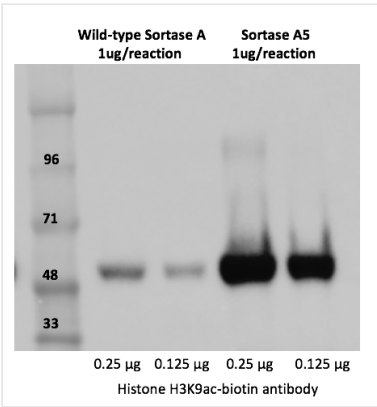
Sortase A5; Recombinant Sortase A5 protein; Sortase A5 recombinant protein

PRODUCT SPECIFICATIONS

Host	E Coli
Form/Format	Sortase A5 protein expressed in E Coli and provided at 1mg/ml in 50mM HEPES pH7.5, 150mM NaCl and 20% glycerol. Sortase A5 protein labeling set-50ug , includes:Sortase A5-50ug Reaction Buffer-1 mlStop Solution-150 ul Sortase A5 protein labeling set-250ug
Sequence	MQAKPQIPKD KSKVAGYIEI PDADIKEPVY PGPATREQLN RGVSAEENE SLDDQNISIA GHTFIDRPNY QFTNLKAAKK GSMVYFKVGN ETRKYKMTSI RNVKPTAVGV LDEQKGKDKQ LTLITCDDYN EETGWWETRK IFVATEVKLE HHHHHH
Protein Species	S. aureus
Tag	His-Tag
Protein Details	Recombinant Sortase A5 protein (S. aureus, Uniprot A0A077UNB8-1), containing amino acid substitutions P94R, D160N, D165A, K190E and K196T, was expressed in E Coli and includes a C-terminal 6xHis-Tag
Notes	Sortase A5 recognizes an antibody or protein genetically engineered to contain the LPXTG motif (where X is any amino acid). Sortase A5 cleaves this sequence between the threonine and glycine residues and the terminal glycine is then replaced with any poly-Glycine (G) _n label. Sortase A5 is used in Our Sortag-IT Labeling Kits to attach HRP, biotin, fluorophores and other labels directly to Our AbFlex recombinant antibodies (rAb). The activity of both wild type and Sortase A5 pentamutant proteins are Ca ²⁺ dependent, therefore, Our Sortag-IT labeling buffers and reagents are formulated to contain Ca ²⁺ for optimal protein labeling. In addition, our AbFlex recombinant antibodies are provided in HEPES buffer, which is does not bind Ca ²⁺ and will not interfere with the Sortase A5 enzymatic activity.
Dry Ice Note	The product may be shipped with dry ice, and an additional fee may be added to your shipping cost.
Preparation and Storage	Store at -80 degree C to prevent degradation and avoid repeated freeze/thaw cycles. This product is guaranteed for 6 months from date of arrival. Shipping Temp: Dry Ice

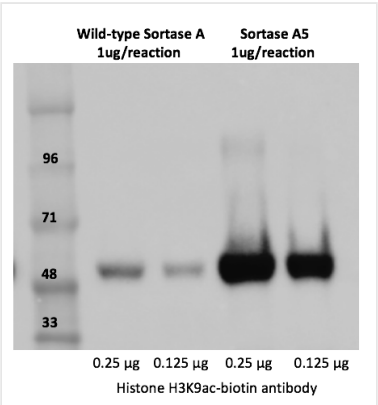


Application Data



SDS-PAGE

Sortase A5 has increased labeling efficiency compared to the Wild-Type sortase. The H3K9Ac AbFlex antibody (67 ug) was labeled with 5 ug Biotin (1.28 mM) using 1 ug Sortase A5 or Wild-Type sortase at 30 degree C for 2 hr. with shaking. Top Panel: Following purification, 0.25 and 0.125 ug of labeled antibodies were run on an SDS-PAGE PAGE gel and labeling was detected using streptavidin-HRP. Lanes 1 & 2: 0.25 ug and 0.125 ug of H3K9Ac AbFlex Ab labeled with wild-type Sortase, respectively. Lanes 3 & 4: 0.25 ug and 0.125 ug of H3K9Ac AbFlex Ab labeled with Sortase A5, respectively. Bottom panel: The intensity of the labeling was quantified using BioRad's Gel Doc imaging system, represented here as arbitrary units.



SDS-PAGE

Sortase A5 protein gel. Sortase A5 run on an SDS-PAGE gel and stained with Coomassie Blue.

ADDITIONAL INFORMATION

Related Product Information for Sortase A5 recombinant protein

Short Description: Sortag-IT Labeling Kits are designed for site-specific labeling of Our highly specific AbFlex recombinant antibodies (rAb) via the Sortase tag recognition sequence (LPXTG) that is incorporated into the heavy chains of each AbFlex antibody. Directly conjugate fluorophores, enzymes (HRP, AP), biotin, peptides, DNA, carbohydrates or other labels to the terminal end of the heavy chain to ensure the antigen binding site remains available for target recognition. The Sortag-IT Labeling Kits use Our Sortase A5 pentamutant from Staphylococcus aureus that is significantly more active than wild-type Sortase to provide a faster, more efficient labeling reaction. Simply add your AbFlex antibody with the poly-Glycine label, add Sortase A5 and incubate for approximately 1 hour. Purification columns are included to remove excess label and Stop Solution is provided to inactivate the Sortase A5 enzyme. Labeled antibodies are ready for downstream analysis or can be stored at 4C for up to 3 months.

Background: Sortase belongs to a class of transpeptidases that utilize an active site cysteine thiol to modify proteins by recognizing and cleaving a carboxy-terminal sorting signal, LPXTG (where X is any amino acid), between the threonine and glycine residues. Sortase A5 is an engineered pentamutant variant of the wild-type sortase from Staphylococcus aureus that is significantly more active than the wild-type sortase. Sortase A5 site-specifically labels antibodies or proteins when the LPXTG recognition sequence is displayed. Easily attach a wide variety of labels such as peptides, DNA, carbohydrates or fluorophores containing a poly-Glycine sequence (Gly)_n (where n = 3 or more Glycine residues). Sortase A5 Pentamutant is covered by US patent number 9,267,127.

NCBI AND UNIPROT INFORMATION

UniProt Accession #	A0A077UNB8
Molecular Weight	17.8kDa

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/sortase-a5-recombinant-protein-e-coli/59632>