

## Wingless Type MMTV Integration Site Family, Member 5A (WNT5A) Active Protein | WNT5A active protein

Active Wingless Type MMTV Integration Site Family, Member 5A (WNT5A)

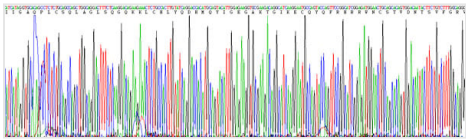
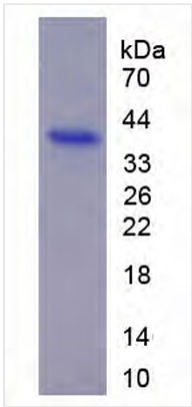
|                               |                        |                                              |                                                     |
|-------------------------------|------------------------|----------------------------------------------|-----------------------------------------------------|
| CATALOG #<br><b>AAA149267</b> | HOST<br><b>E. coli</b> | REACTIVITY<br><b>Rattus norvegicus (Rat)</b> | APPLICATIONS<br><b>Activity Assay, Cell Culture</b> |
|-------------------------------|------------------------|----------------------------------------------|-----------------------------------------------------|

### PRODUCT SYNONYMS

Wingless Type MMTV Integration Site Family; Member 5A (WNT5A); Active Wingless Type MMTV Integration Site Family; WNT5A active protein

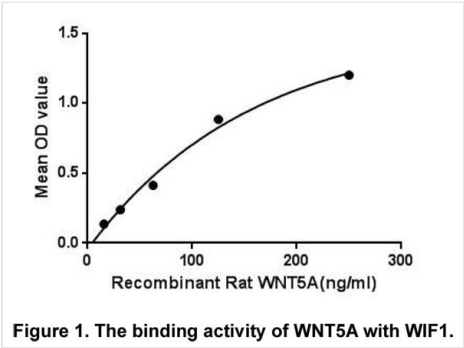
### PRODUCT SPECIFICATIONS

|                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                                             | E. coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Reactivity                                       | Rattus norvegicus (Rat)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Purity/Purification                              | >95%                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Form/Format                                      | 20mM Tris, 150mM NaCl, pH8.0, containing 0.01% sarcosyl and 5% trehalose.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Applicable Applications for WNT5A active protein | Activity Assay, Cell Culture                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Source                                           | Prokaryotic expression                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Residues                                         | Ile62–Lys380                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Tags                                             | N-terminal His-tag                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Endotoxin Level                                  | <1.0EU per 1ug (determined by the LAL method).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Predicted isoelectric point                      | 8.8                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Usage                                            | Reconstitute in 20mM Tris, 150mM NaCl (pH8.0) to a concentration of 0.1-1.0 mg/mL. Do not vortex.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Activity                                         | Wingless Type MMTV Integration Site Family, Member 5A (WNT5A) is a ligand for members of the frizzled family of seven transmembrane receptors. Can activate or inhibit canonical Wnt signaling, depending on receptor context. Stimulates cell migration. Decreases proliferation, migration, invasiveness and clonogenicity of carcinoma cells and may act as a tumor suppressor. Besides, WNT Inhibitory Factor 1 (WIF1) has been identified as an interactor of WNT5A, thus a binding ELISA assay was conducted to detect the interaction of recombinant rat WNT5A and recombinant rat WIF1. Briefly, WNT5A were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to WIF1-coated microtiter wells and incubated for 2h at 37?. Wells were washed with PBST and incubated for 1h with anti-WNT5A pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37?. Finally, add 50uL stop solution to the wells and read at 450nm immediately. The binding activity of WNT5A and WIF1 was shown in Figure 1, and this effect was in a dose dependent manner. |
| Preparation and Storage                          | <p><b>Storage:</b><br/>Avoid repeated freeze/thaw cycles.<br/>Store at 2-8 degree C for one month.<br/>Aliquot and store at -80 degree C for 12 months.</p> <p><b>Stability Test:</b><br/>The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37 degree C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |



Gene Sequencing  
Figure 2. Gene Sequencing (extract

SDS\_PAGE  
Figure 3. SDS-PAGE Sample: Active recombinant WNT5A, Rat



IIGAQLCS QLAGLSQGK KLCHLYQDHM QYIGEGAKTG  
IKECQYQFRH RRHNCSTVDN TSVFGRVMQI GSRETAFTYA VSAAGVVMAM  
SRACREGELS TCGCSRAARP KDLPRDWLWG GCGDNIDYGY RFAKEFVDAR  
ERERIHAKGS YESARILMNL HNNEAGRRTV YNLADVACKC HGVSGSCSLK  
TCHLQLADFR KVGDALEKEY DSAAAMRLNS RGKLVQVNSR FNSPTTQDLV  
YIDPSPDYCV RNESTGSLGT QGRLCNKTSE GMDGCELMCC GRGYDQFKTV  
QTERCHCKFH WCCYVKCKKC TEIVDQFVCK

Sequence

**Bioactivity**  
Figure. The binding activity of WNT5A with WIF1. Wingless Type MMTV Integration Site Family, Member 5A (WNT5A) is a ligand for members of the frizzled family of seven transmembrane receptors. Can activate or inhibit canonical Wnt signaling, depending on receptor context. Stimulates cell migration. Decreases proliferation, migration, invasiveness and clonogenicity of carcinoma cells and may act as a tumor suppressor. Besides, WNT Inhibitory Factor 1 (WIF1) has been identified as an interactor of WNT5A, thus a binding ELISA assay was conducted to detect the interaction of recombinant rat WNT5A and recombinant rat WIF1. Briefly, WNT5A were diluted serially in PBS, with 0.01% BSA (pH 7.4). Duplicate samples of 100uL were then transferred to WIF1-coated microtiter wells and incubated for 2h at 37 degree C. Wells were washed with PBST and incubated for 1h with anti-WNT5A pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody, wells were aspirated and washed 3 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37 degree C. Finally, add 50uL stop solution to the wells and read at 450nm immediately. The binding activity of WNT5A and WIF1 was shown in Figure 1, and this effect was in a dose dependent manner.

ADDITIONAL INFORMATION

|                                                    |                     |
|----------------------------------------------------|---------------------|
| Product Categories/Family for WNT5A active protein | Signal Transduction |
|----------------------------------------------------|---------------------|

NCBI AND UNIPROT INFORMATION

|                         |                                                                                                                    |
|-------------------------|--------------------------------------------------------------------------------------------------------------------|
| NCBI GI #               | 1307742036                                                                                                         |
| NCBI GeneID             | 102089531                                                                                                          |
| Molecular Weight        | Predicted Molecular Mass: 39.5kDa<br>Accurate Molecular Mass: 40kDa as determined by SDS-PAGE reducing conditions. |
| NCBI Official Full Name | wingless-type MMTV integration site family, member 5A                                                              |
| NCBI Official Symbol    | WNT5A                                                                                                              |

**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-rat-rattus-rattus-norvegicus-active-protein/wingless-type-mmtv-integration-site-family-member-5a-wnt5a/149267>