

DESCRIPTION

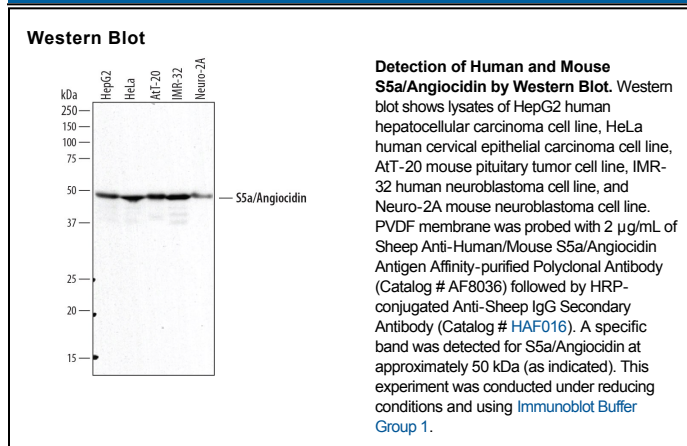
| | |
|---------------------------|---|
| Species Reactivity | Human/Mouse |
| Specificity | Detects human and mouse S5a/Angiocidin in Western blots. |
| Source | Polyclonal Sheep IgG |
| Purification | Antigen Affinity-purified |
| Immunogen | <i>E. coli</i> -derived recombinant human S5a/Angiocidin Met1-Lys377 Accession # P55036 |
| Formulation | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS. |

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

| | Recommended Concentration | Sample |
|---------------------|----------------------------------|---------------|
| Western Blot | 2 µg/mL | See Below |

DATA



PREPARATION AND STORAGE

| | |
|--------------------------------|--|
| Reconstitution | Sterile PBS to a final concentration of 0.2 mg/mL. |
| Shipping | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C |
| Stability & Storage | Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution. |

BACKGROUND

S5a (26S proteasome regulatory subunit S5a/RPN10/nonATPase 4; also Angiocidin, ASF and multiubiquitin chain-binding protein) is a 50-60 kDa protein that belongs to the proteasome subunit S5A family of molecules. It is ubiquitously expressed, and found in both cytosol and in association with the 26S proteasome. Intracellularly, proteins targeted for degradation are marked by ubiquitin (Ub), a 9 kDa polypeptide. Following ubiquitination, proteins so marked are recognized by a degradation unit composed of three complexes, a central 20S complex and two flanking 19S complexes. The 20S barrel-shaped complex contains 28 subunits, one of which is S5a. This subunit binds Lys48 multiubiquitinated proteins, and contributes to proteasome-based proteolysis. S5a also binds proteins with intrinsic Ub-like sequences, and is posited to contribute to their degradation. Notably, S5a interacts with E3/E2 pairs to insure that non-forked Ub chains appear on target proteins. Failure to do so leads to forked Ub chains that are poor proteasome targets. S5a also exists in the circulation, and appears to bind TSP-1. Extracellularly, S5a is reported to possess both antiangiogenic and antiproliferative activity, and to promote inflammatory mediator secretion from mononuclear cells. Human S5a is synthesized as a 377 amino acid (aa) protein that contains one vWF-A type domain (aa 5-188) and two UIM, or Ub-interacting motifs (aa 211-230 and 282-301). There are at least three utilized Ser phosphorylation sites. Although mouse S5a has four reported splice forms, human appears to have but two, one that contains a GlyGluArg insertion after Glu254 (called angiocidin), and a second 32-33 kDa isoform that exists in the embryo and contains a 14 aa substitution for aa 255-377. Full-length human S5a shares 96% aa sequence identity with mouse S5a.