

ASRGL1 (LA-52): sc-130472

BACKGROUND

ASRGL1 (asparaginase-like protein 1), also known as CRASH, is a 308 amino acid protein belonging to the Ntn-hydrolase family. This family of proteins shares a four-layered, catalytically-active $\alpha\beta\beta\alpha$ -core structure and has been shown to be evolutionarily related to penicillin V acylase. Specifically, asparaginases utilize asparagine as a substrate to produce aspartic acid and ammonia. ASRGL1 has been identified as an autoantigenic protein that is present in the mid-piece of sperm after obstruction of the male reproductive tract. Suggested to subcellularly localize to mitochondria, ASRGL1 is expressed highly in testis, but is also expressed in brain, kidney and gastrointestinal tissues. High levels of ASRGL1 have also been identified in ovarian, uterine and mammary tumors in comparison with normal tissues of the same origin. There are two named isoforms of ASRGL1 which are produced by alternative splicing.

REFERENCES

- Handley, H.H., et al. 1988. Post-vasectomy sperm autoimmunogens in the Lewis rat. *Biol. Reprod.* 39: 1239-1250.
- Handley, H.H., et al. 1991. Localization of post-vasectomy sperm autoantigens in the Lewis rat. *J. Reprod. Immunol.* 20: 205-220.
- Herr, J.C., et al. 1999. Sperm mitochondria-associated cysteine-rich protein (SMCP) is an autoantigen in Lewis rats. *Biol. Reprod.* 61: 428-435.
- Suresh, C.G., et al. 1999. Penicillin V acylase crystal structure reveals new Ntn-hydrolase family members. *Nat. Struct. Biol.* 6: 414-416.
- Bush, L.A., et al. 2002. A novel asparaginase-like protein is a sperm auto-antigen in rats. *Mol. Reprod. Dev.* 62: 233-247.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 609212. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Evtimova, V., et al. 2004. Identification of CRASH, a gene deregulated in gynecological tumors. *Int. J. Oncol.* 24: 33-41.

CHROMOSOMAL LOCATION

Genetic locus: ASRGL1 (human) mapping to 11q12.3.

SOURCE

ASRGL1 (LA-52) is a mouse monoclonal antibody raised against recombinant ASRGL1 of human origin.

PRODUCT

Each vial contains 200 μ l ascites containing IgG_{2a} kappa light chain with < 0.1% sodium azide.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

APPLICATIONS

ASRGL1 (LA-52) is recommended for detection of ASRGL1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for ASRGL1 siRNA (h): sc-96527, ASRGL1 shRNA Plasmid (h): sc-96527-SH and ASRGL1 shRNA (h) Lentiviral Particles: sc-96527-V.

Molecular Weight of ASRGL1 isoforms: 25/17 kDa.

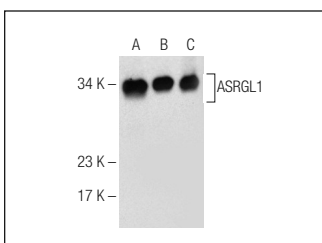
Positive Controls: HeLa whole cell lysate: sc-2200, U-87 MG cell lysate: sc-2411 or human testis extract: sc-363781.

RECOMMENDED SUPPORT REAGENTS

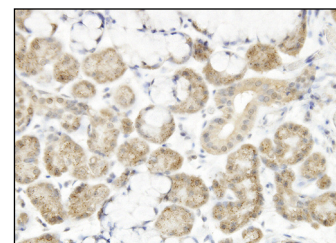
To ensure optimal results, the following support reagents are recommended:

- Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048.
- Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



ASRGL1 (LA-52): sc-130472. Western blot analysis of ASRGL1 expression in HeLa (A) and U-87 MG (B) whole cell lysates and human testis tissue extract (C).



ASRGL1 (LA-52): sc-130472. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human salivary gland tissue showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

- Witting M., et al. 2015. Thermosensitive dendritic polyglycerol-based nanogels for cutaneous delivery of biomacromolecules. *Nanomedicine* 11: 1179-1187.
- Fitzgerald, H.C., et al. 2018. Idiopathic infertility in women is associated with distinct changes in proliferative phase uterine fluid proteins. *Biol. Reprod.* 98: 752-764.

RESEARCH USE

For research use only, not for use in diagnostic procedures.