

IQSEC3 (G-15): sc-324895

BACKGROUND

IQSEC3 (IQ motif and SEC7 domain-containing protein 3), also known as KIAA1110, is a 1,182 amino acid protein that belongs to the BRAG family. Localizing to the cytoplasm, IQSEC3 is expressed predominantly in adult brain, where it is observed predominantly in the cerebral cortex and olfactory bulb, with no expression found in the fetal brain. IQSEC3 contains an IQ domain, a PH domain and a SEC7 domain, and interacts with SAP 97 and PSD-95. Acting as a guanine nucleotide exchange factor (GEF) for ARF1, IQSEC3 is encoded by a gene that maps to human chromosome 12p13.33 and mouse chromosome 6 F1. Mutations to the gene encoding IQSEC2 have been linked to non-syndromic X-linked intellectual disability, while both IQSEC1 and IQSEC3 may be candidates for autosomal ID screening. IQSEC3 exists as two alternatively spliced isoforms.

REFERENCES

- Inaba, Y., et al. 2004. Brain-specific potential guanine nucleotide exchange factor for Arf, synArfGEF (Po), is localized to postsynaptic density. *J. Neurochem.* 89: 1347-1357.
- Scherer, S.E., et al. 2006. The finished DNA sequence of human chromosome 12. *Nature* 440: 346-351.
- Hattori, Y., et al. 2007. Identification of a neuron-specific human gene, KIAA1110, that is a guanine nucleotide exchange factor for ARF1. *Biochem. Biophys. Res. Commun.* 364: 737-742.
- Shoubridge, C., et al. 2010. Subtle functional defects in the Arf-specific guanine nucleotide exchange factor IQSEC2 cause non-syndromic X-linked intellectual disability. *Small Gtpases* 1: 98-103.
- Fukaya, M., et al. 2011. SynArfGEF is a guanine nucleotide exchange factor for Arf6 and localizes preferentially at post-synaptic specializations of inhibitory synapses. *J. Neurochem.* 116: 1122-1137.

CHROMOSOMAL LOCATION

Genetic locus: IQSEC3 (human) mapping to 12p13.33; Iqsec3 (mouse) mapping to 6 F1.

SOURCE

IQSEC3 (G-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of IQSEC3 of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-324895 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

IQSEC3 (G-15) is recommended for detection of IQSEC3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000); non cross-reactive with BRAG2 or IQSEC2.

IQSEC3 (G-15) is also recommended for detection of IQSEC3 in additional species, including canine and porcine.

Suitable for use as control antibody for IQSEC3 siRNA (h): sc-96232, IQSEC3 siRNA (m): sc-146279, IQSEC3 shRNA Plasmid (h): sc-96232-SH, IQSEC3 shRNA Plasmid (m): sc-146279-SH, IQSEC3 shRNA (h) Lentiviral Particles: sc-96232-V and IQSEC3 shRNA (m) Lentiviral Particles: sc-146279-V.

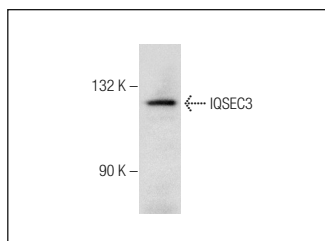
Molecular Weight of IQSEC3 isoforms 1/2: 128/83 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

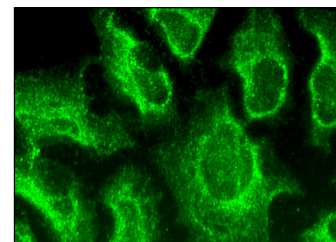
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



IQSEC3 (G-15): sc-324895. Western blot analysis of IQSEC3 expression in K-562 whole cell lysate.



IQSEC3 (G-15): sc-324895. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.