**BACKGROUND**

Gigaxonin, also referred to as giant axonal neuropathy, GAN1, or KLHL16, controls protein degradation and is essential for neuronal function and survival. Gigaxonin is a member of the cytoskeletal BTB/kelch repeat family and influences cytoskeletal organization and dynamics, playing a large role in neurofilament architecture. The amino terminal BTB domain of gigaxonin binds to the ubiquitin-activating enzyme E1, while the carboxy-terminal kelch repeat domain interacts directly with the light chain of microtubule-associated protein 1B (MAP1B), and tags it for degradation. Overexpression of MAP1B may lead to neuronal cell death, whereas a reduction of MAP1B significantly improves the survival rate of neurons. Mutations in the Gigaxonin gene result in human giant axonal neuropathy (GAN), an autosomal recessive neurodegenerative disorder characterized by axonal degeneration caused by cytoskeletal abnormalities, including accumulated intermediate filaments.

**REFERENCES**


**CHROMOSOMAL LOCATION**

Genetic locus: GAN (human) mapping to 16q23.2; GAN (mouse) mapping to 8 E1.

**SOURCE**

Gigaxonin (F-11) is a mouse monoclonal antibody raised against amino acids 201-419 mapping within an internal region of Gigaxonin of human origin.

**PRODUCT**

Each vial contains 200 μg IgG2a kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

**STORAGE**

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

**PROTOCOLS**

See our website at www.scbt.com for detailed protocols and support products.

**APPLICATIONS**

Gigaxonin (F-11) is recommended for detection of Gigaxonin of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:1000-1:10000), 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).

Gigaxonin (F-11) is also recommended for detection of Gigaxonin in additional species, including equine.


Molecular Weight of Gigaxonin: 68 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, SJRH30 cell lysate: sc-2287 or SH-SY5Y cell lysate: sc-3812.

**RECOMMENDED SUPPORT REAGENTS**

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

**DATA**

Gigaxonin (F-11): sc-390067. Western blot analysis of Gigaxonin expression in HeLa (A), SJRH30 (B) and SH-SY5Y (C) whole cell lysates and human hippocampus tissue extract (D).

Gigaxonin (F-11): sc-390067. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

**RESEARCH USE**

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