

# CRLF1 (QQ9): sc-100297

## BACKGROUND

CRLF1 (cytokine receptor-like factor 1), also known as CLF-1 (cytokine-like factor 1), CLF, NR6, zcytor5 or CISS, is a 422 amino acid secreted protein that interacts with cells expressing ciliary neurotrophic factor receptors. A cytokine receptor subunit belonging to the type I cytokine receptor family and type 3 subfamily, CRLF1 is thought to play a role in fetal nervous system development and immunity. CRLF1 is highly expressed in stomach, placenta, heart, ovary, thyroid, bone marrow, appendix, lymph node, spleen, thymus and fetal lung, and promotes neuronal cell survival. Defects in the gene encoding CRLF1 are linked to the development of cold-induced sweating syndrome type 1 (CISS1) and Crisponi syndrome, both of which are autosomal recessive disorders. CISS1 is characterized by profuse sweating induced by cool surroundings. Crisponi syndrome is characterized by feeding and respiratory difficulties, hyperthermia, dysmorphic features and congenital muscular contractions of facial muscles. The majority of cases of Crisponi syndrome result in sudden death.

## REFERENCES

1. Takahashi, R., et al. 1994. A null mutation in the human CNTF gene is not causally related to neurological diseases. *Nat. Genet.* 7: 79-84.
2. Crisponi, G. 1996. Autosomal recessive disorder with muscle contractions resembling neonatal tetanus, characteristic face, camptodactyly, hyperthermia, and sudden death: a new syndrome? *Am. J. Med. Genet.* 62: 365-371.
3. Elson, G.C., et al. 1998. Cytokine-like factor-1, a novel soluble protein, shares homology with members of the cytokine type I receptor family. *J. Immunol.* 161: 1371-1379.
4. Lesser, S.S. and Lo, D.C. 2000. CNTF II, I presume? *Nat. Neurosci.* 3: 851-852.
5. Elson, G.C., et al. 2000. CLF associates with CLC to form a functional heteromeric ligand for the CNTF receptor complex. *Nat. Neurosci.* 3: 867-872.
6. Knappskog, P.M., et al. 2003. Cold-induced sweating syndrome is caused by mutations in the CRLF1 gene. *Am. J. Hum. Genet.* 72: 375-383.
7. Dagoneau, N., et al. 2007. Mutations in cytokine receptor-like factor 1 (CRLF1) account for both Crisponi and cold-induced sweating syndromes. *Am. J. Hum. Genet.* 80: 966-970.
8. Crisponi, L., et al. 2007. Crisponi syndrome is caused by mutations in the CRLF1 gene and is allelic to cold-induced sweating syndrome type 1. *Am. J. Hum. Genet.* 80: 971-981.

## CHROMOSOMAL LOCATION

Genetic locus: CRLF1 (human) mapping to 19p13.11.

## SOURCE

CRLF1 (QQ9) is a mouse monoclonal antibody raised against recombinant CRLF1 of human origin.

## PRODUCT

Each vial contains 100 µg IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

CRLF1 (QQ9) is recommended for detection of CRLF1 of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CRLF1 siRNA (h): sc-97674, CRLF1 shRNA Plasmid (h): sc-97674-SH and CRLF1 shRNA (h) Lentiviral Particles: sc-97674-V.

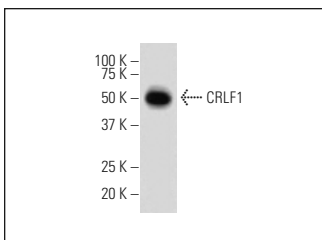
Molecular Weight of CRLF1: 46 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA



CRLF1 (QQ9): sc-100297. Western blot analysis of CRLF1 expression in HeLa whole cell lysate.

## SELECT PRODUCT CITATIONS

1. Stefanovic, L. and Stefanovic, B. 2012. Role of cytokine receptor-like factor 1 in hepatic stellate cells and fibrosis. *World J. Hepatol.* 4: 356-364.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.