

# BRAF35 (F-4): sc-390813

## BACKGROUND

The breast cancer susceptibility gene (BRCA1) localizes to chromosome 17q. Mutations within this gene account for approximately 45% of families with high incidence of breast cancer and at least 80% of families with increased incidence of both early-onset breast cancer and ovarian cancer. A second breast cancer susceptibility gene, BRCA2, located on chromosome 13q12-13, also confers a high incidence of breast cancer, but unlike BRCA1, BRCA2 does not confer a substantially elevated risk of ovarian cancer. The BRCA2-associated factor 35 (BRAF35) protein forms a complex with BRCA2, which associates with condensed chromatin during Histone H3 phosphorylation. BRAF35 expression levels are highest in proliferating tissues and parallel BRCA2 expression patterns. The structure of BRAF35 includes a kinesin-like coiled coil domain and a nonspecific DNA binding HMG domain. The chromatin localization of BRAF35 and antibody microinjection studies indicate a role for the BRAF35/BRCA2 complex in cell cycle regulation.

## REFERENCES

- Hall, J.M., et al. 1990. Linkage of early-onset familial breast cancer to chromosome 17q21. *Science* 250: 1684-1689.
- Narod, S.A., et al. 1991. Familial breast-ovarian cancer locus on chromosome 17q12-q23. *Lancet* 338: 82-83.
- Wooster, R., et al. 1994. Localization of a breast cancer susceptibility gene, BRCA2, to chromosome 13q12-13. *Science* 265: 2088-2090.
- Futreal, P.A., et al. 1994. BRCA1 mutations in primary breast and ovarian carcinomas. *Science* 266: 120-122.
- Marmorstein, L.Y., et al. 2001. A human BRCA2 complex containing a structural DNA binding component influences cell cycle progression. *Cell* 104: 247-257.

## CHROMOSOMAL LOCATION

Genetic locus: HMG20B (human) mapping to 19p13.3; Hmg20b (mouse) mapping to 10 C1.

## SOURCE

BRAF35 (F-4) is a mouse monoclonal antibody raised against amino acids 250-317 mapping at the C-terminus of BRAF35 of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-390813 X, 200 µg/0.1 ml.

BRAF35 (F-4) is available conjugated to agarose (sc-390813 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390813 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390813 PE), fluorescein (sc-390813 FITC), Alexa Fluor® 488 (sc-390813 AF488), Alexa Fluor® 546 (sc-390813 AF546), Alexa Fluor® 594 (sc-390813 AF594) or Alexa Fluor® 647 (sc-390813 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390813 AF680) or Alexa Fluor® 790 (sc-390813 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

BRAF35 (F-4) is recommended for detection of BRAF35 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

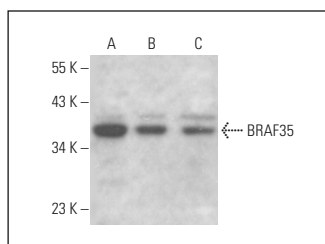
Suitable for use as control antibody for BRAF35 siRNA (h): sc-37536, BRAF35 siRNA (m): sc-61844, BRAF35 shRNA Plasmid (h): sc-37536-SH, BRAF35 shRNA Plasmid (m): sc-61844-SH, BRAF35 shRNA (h) Lentiviral Particles: sc-37536-V and BRAF35 shRNA (m) Lentiviral Particles: sc-61844-V.

BRAF35 (F-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

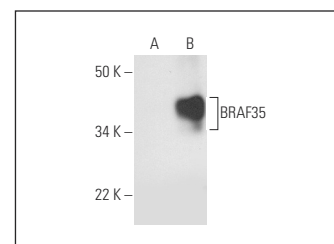
Molecular Weight of BRAF35: 36 kDa.

Positive Controls: HeLa nuclear extract: sc-2120, A-431 whole cell lysate: sc-2201 or BRAF35 (m): 293T Lysate: sc-118838.

## DATA



BRAF35 (F-4): sc-390813. Western blot analysis of BRAF35 expression in HeLa (A) and MCF7 (B) nuclear extracts and A-431 whole cell lysate (C).



BRAF35 (F-4): sc-390813. Western blot analysis of BRAF35 expression in non-transfected: sc-117752 (A) and mouse BRAF35 transfected: sc-118838 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Liu, Y.L., et al. 2014. Noxa upregulation by oncogenic activation of MEK/ERK through CREB promotes autophagy in human melanoma cells. *Oncotarget* 5: 11237-11251.
- Rugiero-Martínez, C.I., et al. 2022. Dp71 point mutations induce protein aggregation, loss of nuclear lamina integrity and impaired BraF35 and ibrf function in neuronal cells. *Int. J. Mol. Sci.* 23: 11876.

## 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.

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