

PUMA α / β (D-20): sc-20536

BACKGROUND

PUMA (Bcl-2 binding component 3, JFY1, PUMA/JFY1) is a mitochondrial pro-apoptotic Bcl-2 homology domain (BH3)-only protein that induces rapid apoptosis through a Bax- and mitochondria-dependent pathway. The PUMA gene encodes four proteins originating from different splice variants of the same transcript: PUMA α , β , γ and δ . Both PUMA α and PUMA β contain a BH3 domain, while PUMA γ and PUMA δ lack this domain. The BH3 domain is essential for binding of PUMA α and PUMA β to Bcl-2 or Bcl-x_L. PUMA is an initiator of γ -radiation apoptosis and glucocorticoid-induced apoptosis in lymphoid cells *in vivo*. Bcl-2 family members generally regulate apoptosis and transmit death signals to mitochondria. Members of this family include both pro- and anti-apoptotic proteins that share homologous sequences known as Bcl-2 homology domains (BH1-4). The BH3 proteins, BID, NOXA, PUMA, NBK, Bim and Bad, are all pro-apoptotic and share sequence homology within the amphipathic α -helical BH3 region.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: BBC3 (human) mapping to 19q13.32; Bbc3 (mouse) mapping to 7 A2.

SOURCE

PUMA α / β (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of PUMA α of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-20536 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

PUMA α / β (D-20) is recommended for detection of PUMA α / β of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

PUMA α / β (D-20) is also recommended for detection of PUMA α / β in additional species, including canine and porcine.

Suitable for use as control antibody for PUMA siRNA (h): sc-37153, PUMA siRNA (m): sc-37154, PUMA shRNA Plasmid (h): sc-37153-SH, PUMA shRNA Plasmid (m): sc-37154-SH, PUMA shRNA (h) Lentiviral Particles: sc-37153-V and PUMA shRNA (m) Lentiviral Particles: sc-37154-V.

Molecular Weight of PUMA α / β : 18-24 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, MOLT-4 cell lysate: sc-2233 or U-937 cell lysate: sc-2239.

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) 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.

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.



Try **PUMA α / β (G-3): sc-374223**, our highly recommended monoclonal alternative to PUMA α / β (D-20).