

# Factor XII (G-20): sc-66750

## BACKGROUND

Hemostasis following tissue injury involves the deployment of essential plasma procoagulants which are involved in a blood coagulation cascade leading to the formation of insoluble fibrin clots and the promotion of platelet aggregation. Factor XII, (FXII) a blood coagulation factor is a serum glycoprotein that participates in fibrinolysis, as well as the generation of bradykinin and angiotensin. An enzyme of the serine protease (or serine endopeptidase) class, it activates both Factor XI and prekallikrein in the coagulation cascade. Factor XII deficiency, a rare hereditary disorder slightly more prevalent among Asians, does not cause excessive hemorrhaging since other coagulation factors compensate for it. Researchers have still reported Factor XII deficiency to be a risk factor for the development of arterial and venous thromboembolism. The gene for human Factor XII maps to the very end of the long arm of the fifth chromosome (5q33-qter).

## REFERENCES

1. Zabel, B.A., et al. 2005. Chemerin activation by serine proteases of the coagulation, fibrinolytic and inflammatory cascades. *J. Biol. Chem.* 280: 34661-34666.
2. D'Uva, M., et al. 2005. Acquired Factor XII deficiency in a woman with recurrent pregnancy loss: working on a differential diagnosis in a single case. *J. Transl. Med.* 3: 43.
3. Pavlov, V., et al. 2006. Probing single-stranded DNA and its biomolecular interactions through direct catalytic activation of Factor XII, a protease of the blood coagulation cascade. *Biochem. Biophys. Res. Commun.* 349: 1011-1015.
4. Doggen, C.J., et al. 2006. Levels of intrinsic coagulation factors and the risk of myocardial infarction among men: Opposite and synergistic effects of Factors XI and XII. *Blood* 108: 4045-4051.
5. Osborn, N.K., et al. 2006. Factor XII deficiency acquired by orthotopic liver transplantation: case report and review of the literature. *Am. J. Transplant.* 6: 1743-1745.
6. Kleinschnitz, C., et al. 2006. Targeting coagulation Factor XII provides protection from pathological thrombosis in cerebral ischemia without interfering with hemostasis. *J. Exp. Med.* 203: 513-518.
7. Bertolaccini, M.L., et al. 2007. Factor XII autoantibodies as a novel marker for thrombosis and adverse obstetric history in patients with systemic lupus erythem-atosus. *Ann. Rheum. Dis.* 66: 533-536.

## CHROMOSOMAL LOCATION

Genetic locus: F12 (mouse) mapping to 13 B1.

## SOURCE

Factor XII (G-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Factor XII of mouse origin.

## STORAGE

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

## 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-66750 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Factor XII (G-20) is recommended for detection of Factor XII of mouse and rat 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).

Factor XII (G-20) is also recommended for detection of Factor XII in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Factor XII siRNA (m): sc-62291, Factor XII shRNA Plasmid (m): sc-62291-SH and Factor XII shRNA (m) Lentiviral Particles: sc-62291-V.

Molecular Weight of Factor XII: 28/50 kDa.

## 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.

## 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) or our catalog for detailed protocols and support products.