

Recipe 2.3. Creating a polypeptide

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1. Problem

You want to create peptides or proteins.

2. Solution

The peptide builder is fitted to create any type of peptides or proteins:

```
// a simple peptide (peptide type by default)
new Peptide.Builder("MQRSTATGCFKL").build();

// a simple protein (human albumin)
new Peptide.Builder("
    MKWVTFISLLFLFSSAYSIRGVFRRDAHKSEVAHRFKDLGEEFNFKALVLIIFAQYLQQCPF
    EDHVKLVNEVTEFAKTCVADESAENCDKSLHTLFGDKLCTVATLRETYGEMADCCAKQEP
    ERNECFLQHKDDNPPLPRLVLRPEVDVMCTAFHDNEETFLKKYLYE IARRHPYFYAPELLF
    FAKRYKAAFTECCQAADKAAACLLPKLDELDRDEGKASSAKQRLKCASLQKFGERAFKAWAV
    ARLSQRFPKAEFAEVSKLVTDLTKVHTECCHGDLLCADDRADLAKY ICENQDSI SSKLK
    ECCEKPLLEKSHCIAEVENDEMPADLPSLAADFVESKDVCKNYAEAKDVFLGMFLYEYAR
    RHPDYSVVLRLAKTYETTLEKCCAAADPHECYAKVFDEFKPLVEEPQNLIKQNCELFE
    QLGEYKFNALLVRYTKKVPQVSTPTLVEVSRNLGKVGSKCCKHPEAKRMPCAEDYLSVV
    LNQLCVLHEKTPVSDRVTKCCTESLVNRRPCFSALEVDETYVPKEFNAETFTFHADICTL
    SEKERQIKKQTALVELVKHKPKATKEQLKAVMDDFAAFVEKCKADDKETCFAEEGKKLV")
    .nterm(NTerminus.PROT_N).cterm(CTerminus.PROT_C)
    .build();

// a peptide with modification
new Peptide.Builder("MQR(O2)STAT({14.0})GCFK(AminoAcid:R)L")
    .build();

// a peptide with ambiguities
new Peptide.Builder("MQRSTAT({14.0})GCFKXL").ambiguityEnabled()
    .build();

// a peptide from a list of molecules (for more informations,
// see recipe below)
Peptide.valueOf(molecules);
```

3. Discussion

4. See Also

See also this recipe to [create a peptide from a list of molecules](#).